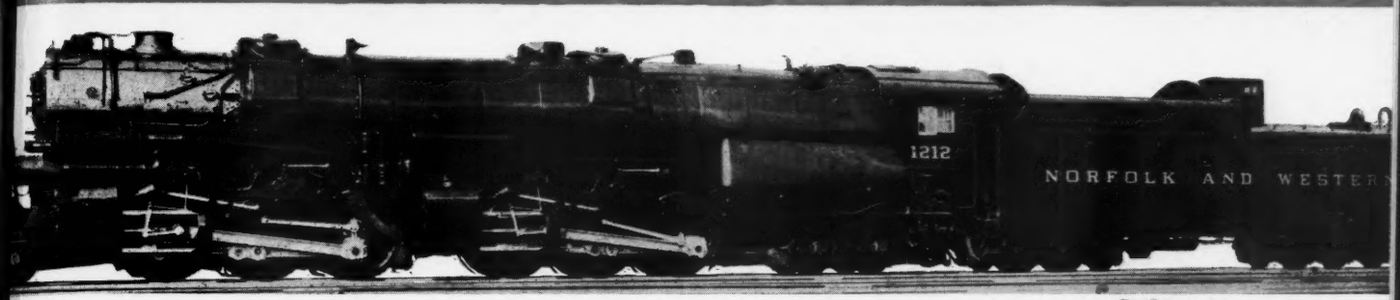
Transportation Library

APRIL 3, 1943

APR 6 1943

Railway Age

Founded in 1856



Transportation Library
TF
1
.R13

15 NEW LOCOMOTIVES LIKE THIS . . . ALL PIPED WITH BYERS WROUGHT IRON

Every month from March to December in 1942 saw a new record established in locomotive utilization—and saw the October records both of 1929 and 1941 broken. Such performance calls for maximum time on the rails, minimum time in the backshop . . . and spotlights today's need for the ultimate in dependability in every part.

This insistence on overall durability is indicated by specifications for new locomotives. Norfolk and Western Railway is building fifteen Class A 2-6-6-4's in their own shops. Byers Wrought Iron is used for piping. This material was also used on large N & W passenger locomotives built a couple of years ago.

With the biggest job in transportation history behind them, the railroads are facing a still bigger job ahead. New equipment won't take care of all the increase; greater utilization of present equipment must carry part of the load. Materials for both new construction and for repairs will have to be measured against stiffer standards than ever before.

If you have any services, such as staybolts, drawbars, equalizer bars, spring hangers, slope sheets, lubricator piping, air lines, car-heating coils and other applications where corrosion or fatigue shorten the usual life of ordinary materials, we urge that you investigate the proven advantages of installing wrought iron. For many years engineers have made such wide-spread use of it that a large number of performance records are available, which provide a dependable guide in selection. Our Engineering Service Department will be glad to give you a report on users' experience in any application we have in file. Just write. Ask, too, for our General Catalog.

A. M. Byers Company. Established 1864. Offices in Pittsburgh, Boston, New York, Philadelphia, Washington, Chicago, St. Louis, Houston, Seattle, San Francisco.

BYERS

GENUINE WROUGHT IRON

TUBULAR AND HOT ROLLED PRODUCTS

ELECTRIC FURNACE ALLOY STEELS · OPEN HEARTH ALLOY STEELS
CARBON STEEL TUBULAR PRODUCTS

CORROSION COSTS YOU MORE THAN WROUGHT IRON

TRANSPORTATION LIBRARY

Reliance HY-CROME *Spring Washers*

Locomotive
Hy-Crome Spring Washers

KEEPING locomotive bolts tight has been a serious problem for motive power maintenance men to cope with. The result of engineering research and field tests have proven these expensive troubles can be eliminated through use of the Locomotive Hy-Crome Spring Washer.

For specific and various locomotive bolt applications, this device has proven successful in overcoming expensive engine failures.

Our folder on Locomotive Hy-Crome Spring Washers, or service engineers can supply complete data. References covering service applications gladly supplied.

Eaton Manufacturing Company
RELIANCE SPRING WASHER DIVISION
MASSILLON, OHIO
New York • Cleveland • Detroit • Chicago • St. Louis • San Francisco • Montreal

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price $6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 114, No. 14.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name registered U. S. Patent Office.

Vol. 114 — April 3, 1943 — No. 14

PUBLISHED EACH SATURDAY BY THE SIMMONS-BOARDMAN PUBLISHING CORPORATION, 1309 NOBLE STREET, PHILADELPHIA, PA.; WITH EDITORIAL AND EXECUTIVE OFFICES AT 30 CHURCH STREET, NEW YORK, N. Y., AND 105 W. ADAMS STREET, CHICAGO, ILL.

WASHINGTON, D. C.: 1081 NATIONAL PRESS BUILDING. CLEVELAND: TERMINAL TOWER. SEATTLE: 1038 HENRY BUILDING. SAN FRANCISCO: 300 MONTGOMERY STREET, ROOMS 805-806. LOS ANGELES: 560 WEST 6th STREET.

SAMUEL O. DUNN, CHAIRMAN. HENRY LEE, PRESIDENT. ROY V. WRIGHT, VICE-PRESIDENT AND SECRETARY. F. H. THOMPSON, E. T. HOWSON, F. C. KOCH, R. E. THAYER, H. A. MORRISON, J. G. LYNE, VICE-PRESIDENTS. J. T. DeMOTT, TREASURER.

SAMUEL O. DUNN, EDITOR. ROY V. WRIGHT, MANAGING EDITOR. ELMER T. HOWSON, WESTERN EDITOR. JAMES G. LYNE, ASS'T TO EDITOR. C. B. PECK, ALFRED G. OEHLER. E. L. WOODWARD. J. H. DUNN. D. A. STEEL. R. A. DOSTER. H. C. WILCOX. NEAL D. HOWARD. CHARLES LAYNG. GEORGE E. BOYD. WALTER J. TAFT. M. H. DICK. JOHN S. VREELAND. ARTHUR J. McGINNIS. J. L. STOVER. C. B. TAVENNER. H. E. MEASON. LIBRARIAN: EDITH C. STONE. EDITORIAL ASSISTANT, LOUISE MULLER.

RAILWAY AGE IS A MEMBER OF ASSOCIATED. BUSINESS PAPERS (A. B. P.) AND AUDIT BUREAU OF CIRCULATIONS (A. B. C.).

SUBSCRIPTIONS, INCLUDING 52 REGULAR WEEKLY ISSUES, AND SPECIAL DAILY EDITIONS PUBLISHED FROM TIME TO TIME IN NEW YORK, OR IN PLACES OTHER THAN NEW YORK, PAYABLE IN ADVANCE AND POSTAGE FREE. UNITED STATES, U. S. POSSESSIONS AND CANADA: 1 YEAR $6.00; 2 YEARS, $10.00; FOREIGN COUNTRIES, NOT INCLUDING DAILY EDITIONS: 1 YEAR, $8.00; 2 YEARS, $14.00. SINGLE COPIES, 25 CENTS EACH. H. E. McCANDLESS, CIRCULATION MANAGER, 30 CHURCH STREET, NEW YORK.

In This Issue

Page

Milwaukee's 31 New Passenger Cars 656

With traffic now 74 percent higher than in 1941, this new equipment enabled the handling of record-breaking war and civilian passenger traffic in 1942.

Fireproof Shop Buildings on U. P. 666

These structures incorporate features which are promoting greater efficiency in shop operations and insure uninterrupted operations in the future.

Purchases Reached Peak in 1942 676

Carriers and private car lines bought $1⅛ billions of materials last year, but the flow is now being greatly curtailed—Article gives details in tabular form.

EDITORIALS

Preachers of Private Enterprise 653
Part-Time Help 654
New Equipment and Materials Decline 654
How the Railways Have Learned to Co-operate 655

GENERAL ARTICLES

Fort Slocum Graduates More T. C. Officers 661
Further Testimony in Non-Op Case 662
Study Board Favors Uniform Class Rates 664
Speeding Up the Training Programs 670
"Productivity Theory" Of Wages Is Attacked 672
I. C. C. Hears More on Interterritorial Rates 673

COMMUNICATIONS AND BOOKS 683

RAILROADS-IN-WAR NEWS 684

GENERAL NEWS 686

FREIGHT OPERATING STATISTICS 701

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

★

PRINTED IN U. S. A.

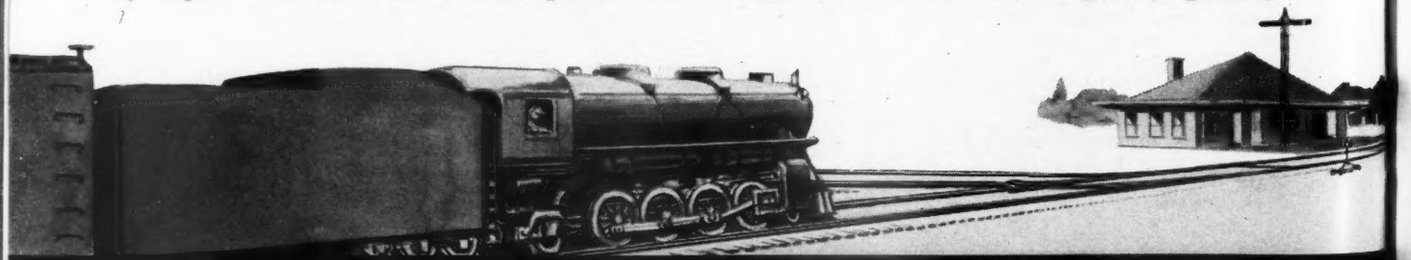
Where can a C. T. C. installation be placed on your road *to increase track capacity quickly?*

AS a result of the unprecedented volume of wartime traffic, congestion has produced serious operating problems at numerous points on many important railroads.

Signal and operating officers recognize "Union" Centralized Traffic Control as the logical solution to such problems, and by its adoption have eliminated many of their difficulties. With the C.T.C. system, train dispatching is based upon up-to-the-minute information as to train progress and the immediate delivery of authority for the planned movements by signal indications at the points of expected action within the territory.

On proposed C.T.C. projects, savings in train time may be forecast with accuracy. Installations can be planned, constructed and placed in service in a relatively short period of time. The amount of critical materials required is much smaller than is necessary to secure equivalent results with other means of expediting traffic.

Since well-informed authorities predict that further increases are to be expected in wartime traffic, we repeat—Where can a C.T.C. installation be placed on your road to increase track capacity quickly?



UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

NEW YORK · CHICAGO · ST. LOUIS · SAN FRANCISCO

RAILWAY AGE

Efficiency FOR VICTORY

Preachers of Private Enterprise

Eric Johnston, president of the Chamber of Commerce of the United States, is seeking with great eloquence, intelligence and energy to awaken the American people to a renewed understanding of the principles of economic self-reliance which have given this nation the industrial strength, by which alone it has been able to constitute itself the effective champion of world-wide freedom. The leadership of the National Association of Manufacturers is engaged in similar educational activity, on a high level of competence.

In a speech at Columbia University last week, Mr. Johnston warned his audience against the dangers of losing our freedom at home (and, hence, our economic strength and well-being), while fighting to defend it abroad. He said:

"No gigantic enterprise can be concentrated in the hands of any government without at the same time concentrating the economic controls and police powers to direct every phase of national life. . . . We know that wherever government has entered into the domain of free enterprise, in so-called 'mixed economies,' it has come to dominate business."

The Chamber of Commerce and the N. A. M. deserve the gratitude and support of the American people for these efforts. These organizations may well be reminded, however, that they are not limited to rhetoric alone in the defense of sound principles. They also have the opportunity to sustain them by practice.

In the domain of transportation, the "mixed economy," which Mr. Johnston so greatly and properly fears, is far advanced—evidencing unmistakably the evils which Mr. Johnston ascribes to it. The recent report of the National Resources Planning Board recognizes the difficulty which privately-owned railroad facilities have in maintaining superior service in competition with highways and waterways provided by enormous public "investment," and it proposes as a remedy that the government acquire the railways' fixed property so that, hereafter, railroad plant also may be provided from the largess of the taxpayers rather than continue as a charge upon railway users.

The proposal of this Board is, undoubtedly, the product of socialist "ideology"—but the unequal competitive conditions between public and private capital used to provide transportation are no socialist invention. These unequal conditions have arisen in answer to the political demands, primarily, of the very business men who applaud most loudly when Presidents Johnston and Crawford of the C. of C. and the N. A. M. speak so feelingly of "free enterprise."

The toll-free waterways of this country have come into being, and are being constantly extended—to the obvious detriment, if not the ruin, of the self-supporting railroads—entirely in response to the political agitation and lobbying of business concerns, members of the C. of C. and the N. A. M. The grandiose schemes now being concocted for post-war construction of a vast system of toll-free "superhighways" have the same origin.

A story is told of the early days of banking, when a store-keeper embarked in the business by the simple expedient of hanging out a sign with the word "Bank" on it. By the end of a month, however, he had taken in $1,000 in deposits, so he decided to put some of his own money into the venture. Perhaps, if C. of C. and N. A. M. eloquence on the principles of free enterprise continues at the present high level, members of these organizations may, at length, be persuaded to try practicing these principles themselves.

We Must Conserve Paper

In obedience to WPB orders requiring publishers to reduce their consumption of paper, this and subsequent issues of *Railway Age* will appear on paper somewhat lighter in weight than that used heretofore, and margins have been narrowed slightly. These expedients will enable us to do our part in the paper-conservation program, while avoiding (or at least postponing) the less-desirable measures of curtailing the amount of reading matter presented, or resorting to smaller-sized type.

Readers will appreciate the necessities of our situation, and we believe they will agree that the means adopted to meet them entail a minimum of inconvenience—far less than any other available alternatives.

Part-Time Help

No one measure will solve the manpower problem that is daily growing more serious in every department of the railroads, and especially in the maintenance of way department. Liberalized draft deferments may help some, but if allowed they will come too late, with the majority of those of draft age already in some form of military service. The freezing of track labor to discourage further defection from the ranks, if it should come, would be largely closing the barn door after the horse has run away. Further strenuous recruiting among the usual sources of track labor will help some, but these sources are drying up or have already been drained in many sections of the country. The employment of women as "trackmen" in yards and terminals will help the situation in some areas, and this expedient should be investigated and extended as the need arises and conditions permit. Immigration of workers from Mexico would afford major relief, especially in the West and Southwest, and should be permitted on a sizeable scale under proper conditions.

All of these means of recruiting essential track labor will need be explored more thoroughly and expanded to their practical limits—but, this having been done, there will still be need for more track labor in many sections of the country as the heaviest working season since the late Twenties begins.

In the search for additional productive man-hours of labor, one other expedient that is being employed with a considerable degree of success by one of the West Coast railroads warrants investigation. Again, this expedient is not a solution in itself, but it appears to be playing *a part*, the value of which cannot be overlooked. This is the employment of part-time, so-called white-collar, workers for Saturdays and Sundays. Started as an experiment a few months ago, this road is now employing as many as 1,000 extra workers over the week-ends at various points on the road—high school and college students, teachers and professors, market men, businessmen, and some professional men —and is utilizing them effectively in various classes of track work.

Is their work really effective? "What gets me is the way these fellows pitch into it," was the comment of one assistant roadmaster recently, who continued, "I never saw such spirit. They may be a little 'green' on the fine points of pulling spikes or slipping tie plates under the rail, but they certainly are there with willingness. My hat is off to these fellows."

And why do they seek week-end employment on the railroad? Whether it is due to a sense of patriotism, a life-time urge to work on a railroad, the time and one-half paid for Sunday work, or a combination of these, is beside the point. The real point is that they seek employment, and come back week after week for more—furnishing the railroad thousands of man-hours of constructive labor that it could secure in no other way. And it is available not only to the track department, because this class of help has been employed repeatedly and effectively in breaking l.c.l. jams in freight houses and at transfer points. There may be plenty of reasons why this practice will not work successfully elsewhere, but where the need is great, the use of part-time white-collar workers, in view of the experience cited, is worth consideration.

New Equipment and Materials Decline

Revised and almost up-to-date statistics regarding the receipts of new equipment and materials by the railways, when compared with the volume of freight and passenger service being rendered, throw new light on the efficiency with which they have been, and still are, using all the resources available. But these statistics also raise anew the question of how much longer the railways can successfully carry on in spite of government restrictions.

Their freight traffic last year was 43 per cent larger, and their passenger traffic 73 per cent larger, than in 1929, although they had available about 28 per cent fewer locomotives, 12 per cent fewer freight cars, and 30 per cent fewer passenger-carrying cars. And yet they were unable to get as much of either new equipment or of materials for maintaining their equipment and other facilities as in 1929.

The number of locomotives built in 1929 was 926, the number of freight cars 82,240 and the number of passenger cars 1,254. The number of new locomotives received in 1942 was only 712; freight cars, 62,578; and passenger cars (previously ordered but completed last year) 254. The total value of materials delivered by manufacturers to Class I roads in 1929 was $992,000,000. In 1942, as shown by revised statistics compiled by *Railway Age,* and presented elsewhere in this

issue, the total was about $835,000,000. When it is considered that because the total traffic handled last year was almost 50 per cent larger than in 1929, the wear and tear on all facilities was much greater, the resourcefulness, effort and efficiency in maintenance work that have been required to keep the plant in condition to meet all demands becomes apparent.

Total materials received by Class I roads in 1942 ($835,000,000) while $157,000,000 less than in 1929, were the largest since that year, comparing with $727,000,000 in 1930 and $813,000,000 in 1941. Receipts of rail costing $56,000,000 were, however, $33,000,000, or 37 per cent, less than in 1929, and receipts of cross-ties costing $63,000,000 were only half as large as in 1930 and 56 per cent less than in 1929. Obviously, with track being subjected to such pounding as during the last two years and at present, it could not long be kept in serviceable and safe condition with two-thirds as much new rail and one-half as many new cross-ties as were needed in 1929.

Meantime, data given in an article elsewhere regarding deliveries of materials in January, 1943, are not encouraging. Incomplete information indicates that freight traffic handled in that month was 25 per cent larger than in January, 1942, and 52 per cent larger than in January, 1941; also that passenger traffic was 91 per cent larger than in January, 1942, and 170 per cent larger than in January, 1941. But in January and February the railways received only 99 new locomotives and less than 3,000 new freight cars, as compared with 115 locomotives and 17,400 freight cars in the first two months of 1942. And in January deliveries of materials to them also declined, being less than $60,000,000, as compared with $77,000,000 in January, 1942, and $81,000,000 in January, 1929. Deliveries of rail in January were less than $5,000,000, as compared with $14,000,000 in January, 1929, and $9,000,000 in January, 1930. Deliveries of cross-ties were only about $4,000,000, as compared with about $10,000,000 in January, 1929 and 1930.

The railways have worked miracles in keeping fit enough to meet demands to date. But abnormally small receipts of new equipment and materials increase the strain of "keeping 'em rolling."

How the S. P. Does It

It would be difficult to name another carrier which has had a heavier war load put upon practically its entire system than the Pacific Lines of the Southern Pacific. In passenger traffic alone the S. P. Pacific Lines were ahead of 1929 four years ago—and now this business is more than double that of 1929. Our transportation editor surveys what and how the S. P. has done this great job, in a two-part article, the first part to appear

In Next Week's Railway Age

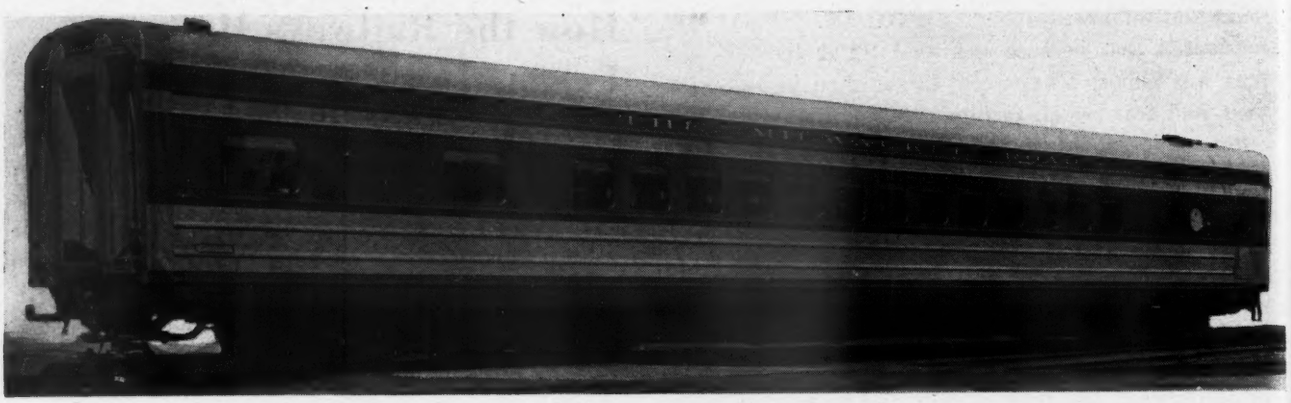
How the Railways Have Learned to Co-operate

Wartime traffic is still being handled by the railways without appreciable car shortages or interruptions to the flow of vital war materials. In fact, it is being handled so well that the layman may get the impression that the task is not difficult. Nothing could be farther from the truth. The utmost effort and vigilance are required. New problems arise every day, and are being solved only by the exercise of the greatest ingenuity and by the subordination of the interests of individual roads.

The spirit of healthy competition in service that once characterized the railways was largely responsible for their development, even through the years of the depression, to the point where the present flood of traffic could be handled with such efficiency. This competition in service was perhaps stronger among the railways than in other industries, since, under the law, there can be no price differentiation in transportation charges and business can be secured only on the basis of service. Perhaps all vestiges of this competitive spirit have not disappeared; but it is a fact that the railways, on the whole, are now doing a remarkable job of working co-operatively.

An example is found in the wheat movement. The highly unusual conditions caused by the government's "ever-normal" granary plan have resulted in a demand on the railways to move far more wheat in recent weeks than they did after last year's harvest, which is normally the period of the wheat rush. Furthermore, the railways have been advised that they will be called upon to move over 400,000,000 bushels more wheat before this year's harvest begins. As a result, much more storage space will be available at harvest time this year than there was last year, which will result in a considerable movement of wheat direct from the harvesting combines to the storage elevators. Thus the movement will be heavy and continuous up to at least August 1. This movement occurs at a time when the equipment of the wheat-loading roads is more widely scattered about the country than it has been at any time since the last war.

Facing this situation, the wheat-loading roads have consulted with one another. They have then made a joint presentation of conditions to representatives of the Car Service Division, the Interstate Commerce Commission and the Office of Defense Transportation. The eastern and southeastern roads have been apprised of the urgency of returning western-owned Class A box cars, and the flow of such cars westward has been arranged for promptly. As a result of this co-operation, it is unlikely that it will be necessary to issue any formal order. Rather, it is expected that the entire problem will be solved by the co-operative efforts of the railways, and what might become a serious car shortage will be averted.



One of the 1942 Coaches

Milwaukee's 31 New Passenger Cars

Equipment built in 1942 has come in handy, what with traffic volume 74 per cent higher than in '41

DURING 1942, the Chicago, Milwaukee, St. Paul & Pacific built at its company shops, Milwaukee, Wis., 31 welded all-steel passenger cars, including 2 diners, 2 auxiliary dining cars, 2 passenger-baggage cars and 25 coaches. This new equipment, built primarily for the Hiawatha, constitutes the fourth edition of the train since it was first inaugurated in May, 1935, and includes entirely new equipment except for the parlor and beaver-tail cars. The replaced cars, substituted in other trains, helped meet the urgent demand for additional passenger equipment and undoubtedly were an important factor in enabling the Milwaukee to handle a record-breaking passenger traffic, both war and civilian, in 1942. The number of passenger miles, for example, increased from over 565 million in 1941 to about 984 million in 1942, or roughly 74 per cent.

The authorization for building this new equipment was given early in 1941 and some material was ordered at that time. However, where improvements were under development, the ordering was necessarily delayed and, as war requirements increased, one material after another was made unavailable for passenger-car construction. As a result, innumerable substitutions were required which made construction of the cars difficult from a production standpoint and seriously added to the car weight. Low-alloy, high-tensile steel was obtained for only a portion of the car parts. In past designs aluminum had been extensively used for air ducts, piping, hardware, etc., and in its place low-carbon steel had to be employed. For instance, steel tubing was used for all furniture in place of aluminum; hair and spring upholstery in place of rubber; windows had to be made without the use of either brass or aluminum; many car specialties, including coach seats and fluorescent lighting fixtures, were not obtainable from the usual sources of supply and substitutes were fabricated.

The new cars have several other special features. The trucks have been redesigned and include Budd disc-type brakes, and the draft gears have been insulated. The car body has been built to comply with both the original Post Office Department specification and the present A. A. R. specification for passenger cars. A skirt has also been added below the body. The vestibule diaphragm and face plate have been redesigned and include a connecting tunnel diaphragm in the vestibule. The interior-finish material is new. Power for air conditioning and lighting is supplied by Waukesha propane engine-driven units; control of car temperature has been improved.

General Construction of the Cars

In the car body, considerable cross-sectional area was added to meet the two specifications mentioned which were treated as separate engineering problems. To comply with these specifications, it was deemed necessary to increase the cross-sectional area in the roof so that the component of buffing stresses carried by the underframe would be balanced in the roof. The introduction of the skirts also added to the weight of the car and, although exceptional care was taken to insulate the car from a sound-deadening standpoint, the noise level is somewhat higher than the low point achieved in cars previously built. While the skirts undoubtedly add to the appearance of the car, they have nevertheless introduced complications in the operation and repair of the equipment. Air circulation for cooling purposes is restricted in summer and especially in winter when tons of ice accumulate on the car underframe.

The cars embody the same general type of welded steel construction as previous Hiawatha equipment. The length is about 82 ft. over coupler pulling faces; width over side posts, 10 ft., and height, 13 ft. 1 in. to the top of the rail. The passenger-baggage car, with a 36-ft. baggage room and a passenger compartment seating 40, weighs 125,700 lb. Other car weights are as follows: Coach, 126,700 lb.; auxiliary diner, 129,000 lb.; diner, 139,500 lb. These are ready-to-run weights.

The coach has a main passenger compartment 48 ft. 10 in. long, seating 56, and a mixed smoking lounge in one end seating 12, thus giving a total seating capacity

How the Diaphragm and Outer Face Plates Are Suspended

of 68. The usual modern wash-room facilities are available in the other end of the car. The auxiliary diner has a 29-ft. compartment in either end with a seating capacity of 26 each. These are separated from a side corridor by low partitions and between them is a 9-ft. 4-in. buffet section equipped to serve lunches and refreshments to a large number of passengers. The dining car seats 48 in the main room and has a 9-ft. 6-in. pantry and an 18-ft. 9-in. kitchen.

The roof of each car consists of sixteen sub-assemblies and four sub-assemblies of two long radius-top sections. These sub-assemblies are fabricated into a completed roof on the roof jig. The side frame is constructed with a two-element side sill, and the entire car frame is spot and arc welded. The platform casting is attached to the center sills by welding beyond the center plate. All underneath equipment is attached to the center sill and concentrated towards the center of the car.

Fiberglas insulation 2½ in. thick is applied in the floors of 11 coaches and Stonefelt in the balance of the car floors. Car sides, roof and ends are protected by Stonefelt, applied in the form of a continuous blanket with as few breaks in the material as possible. Liquid asphaltum is sprayed on the inside surfaces of metal sheets for insulation and sound deadening.

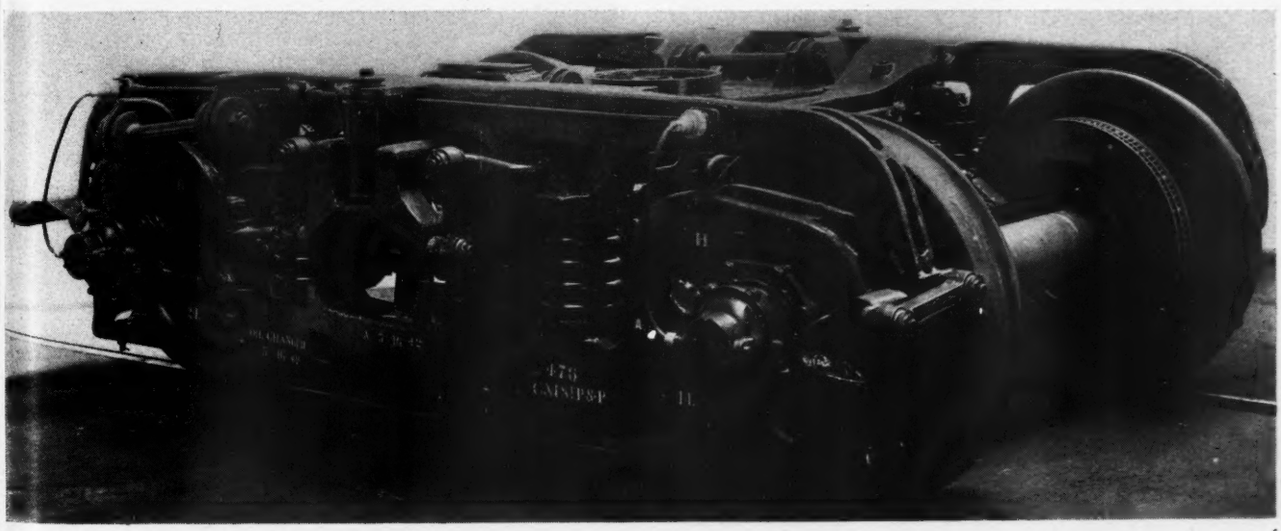
Trucks Embody New Features

The trucks are the result of several years of experimental work on the Milwaukee the first part of which was described in an article beginning on page 862 of the *Railway Age* of May 20, 1939. Eventually a car set of cast-steel trucks was developed, the outstanding feature of which is the use of equalizers extended to include the functions of conventional pedestal jaws. With the exception of the contact with the roller-bearing housing at the top forming a lateral pivoting point, there is no contact surface between the box and the equalizer.

The wheels, axles and bearings are oriented with respect to the truck frame by the use of drawbars and the Budd brake C-frame, the latter being modified so that it is not necessary to remove any part of the brake frame in order to change a pair of wheels. The inner element of the early type two-element journal box so successfully used on Milwaukee passenger cars forms a crowned inner housing for the Timken roller bearings. Urschel-Pittsburgh hollow heat-treated carbon-steel axles are used. With the introduction of this axle and the maintenance of 6-ft. 4-in. journal spacing for trucks of all capacities, including 6 in. by 11 in., the Milwaukee has adopted one standard roller bearing and will gradually have one standard axle on 350 roller-bearing cars, an advantage from a coach-yard maintenance standpoint.

The large bolster coil springs of the truck have the low frequency rate needed when the car is operating at high speeds and are controlled at their unstable period, between 5 and 10 miles an hour, by hydraulic shock absorbers, stem mounted between the truck frame and bolster. The car-body side bearings are 1-in. rubber sandwiches with steel plates, top and bottom, bonded to the rubber. Trucks are equipped with spring steel levelator bars, insulated from the truck bolster by the use of resilient bushings. Lateral shock absorbers are mounted between the bolster and the spring plank controlling the lateral motion of the large bolster coil spring on the passenger-baggage cars, diners and auxiliary diners.

The Rolokron anti-wheel slide device, developed by



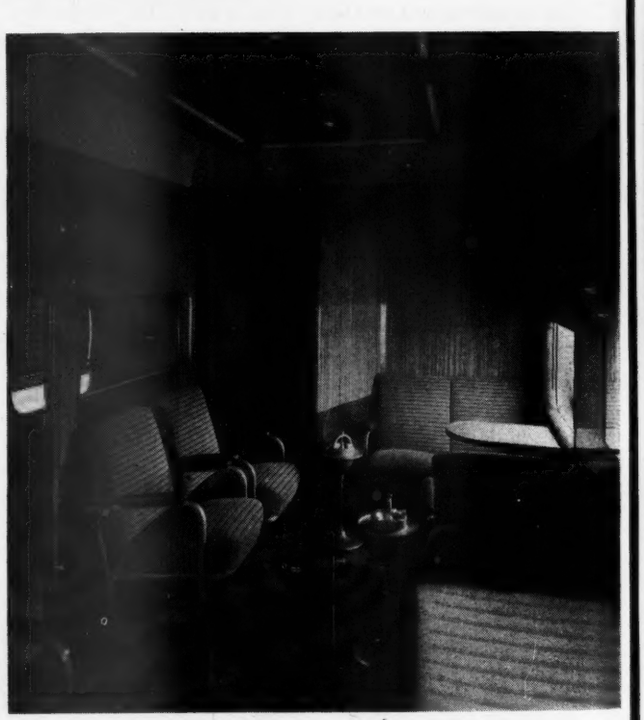
One of the New Trucks With a Budd Brake and Rolokron Anti-Wheel-Slide Device

LEFT — The Auxiliary Diner Is Equipped to Serve Lunches and Refreshments BELOW — Smoking Room for Men and Women in One of the Coaches

the Budd Wheel Company, is applied to the truck with the registers mounted in place of the roller-bearing box covers, and a control box mounted under the car body. The register flywheel is spring driven from the end of the axle. When the retardation rate reaches between 15 and 20 m. p. h. per sec., the driving spring is sufficiently compressed to close a set of contacts which energizes the solenoid valve of the control box. This solenoid valve is a three-way valve controlled by a relay in such a way that the brake-cylinder pressure is exhausted for one second. At the same time the air from the triple valve is shut off. At the end of the one-second interval, the relay valve de-energizes the solenoid, allowing the air from the triple valve to be restored to the brake cylinder. The wheel by this time should again be traveling at relative track speed. If the wheel again tends to slide, this process will be repeated.

The gradual improvements in passenger truck design, as exemplified in the new Milwaukee truck include: (1) Entire elimination of center-plate wear by the introduction of heavy bonded steel-rubber pads, which make lubrication unnecessary and, in fact, undesirable; (2) side-bearing adjustment eliminated by the use of thick bonded steel-rubber pads which are applied with a light initial compression; (3) elimination of elliptic springs with their unknown frictional resistance and replacing them with large helical bolster springs of constant capacity; (4) elimination of pedestal liners with consequent wear on liners and journal boxes; (5) elimination of friction plates between bolsters and transoms and controlling the movement of bolsters by means of rubber-mounted bolster drawbars and levelator bars; (6) positioning the equalizer with respect to the truck frame by lateral and longitudinal rubber-mounted drawbars.

These features have resulted in a practically noiseless design and have eliminated all wear in contact surfaces in the entire truck with the exception of the pins supporting the spring-plank hangers. By virtue of the lateral flexibility of the large equalizer springs, the wear of the spring plank hangers and pins is materially reduced. Although the truck was designed to be interchangeable with the heaviest cars in Milwaukee service and a liberal



allowance was made in the design of the axles, the total weight for a complete car set of trucks is 34,080 lb.

The Miner draft gear is held in a cast-steel enclosure attached to the platform casting through three insulated connectors. The draft gear functions in a normal manner inside the enclosure. The use of the enclosure affords large surfaces for the insulators which would not be possible with the usual construction.

The buffer stem has been pinned back so that it does not contact the buffer channel until the draft gear has been compressed ¾ in. This insulates the buffer center stem from the buffer channels by the simple expedient of avoiding contact except under extreme conditions. The high absorption value of the buffer is still retained

for safety in collision. The buffer diaphragm face plate and the outside enclosure face plate are held together by means of insulated links. This assembly is in turn mounted on the car body by an insulated adjustable link. The outside enclosures are canvas.

Waukesha Air-Conditioning Equipment

Air-conditioning equipment consists of a Waukesha Model-D heavy-duty four-cylinder internal-combustion engine with four-cylinder V-type refrigerant compressor, having a capacity of 7½ tons in 24 hrs. and using Freon as a refrigerant. A sub-cooler is also installed to provide maximum capacity in extreme weather. The fuel system consists of a four-cylinder cabinet, propane cylinders and necessary valves.

The ice engine, sub-cooler and fuel cabinet are located directly under the center of the car. The ice engine can be rolled out to clear the side of the car on tracks, supported from the side sill of the car.

At one end of each car, a Young Radiator Company's overhead roof-mounted blower unit is installed, built according to specifications submitted by the railroad. The overhead unit is mounted on four Firestone rubber vibration insulators on metal supports fastened to the roof carlines. There is a roof hatch for removing the unit proper.

Fresh air is taken into the car at the vestibule end through an opening in the end sheet and by-passes itself to a plenum chamber where three Farr air filters are mounted in an inclined position to obtain as much free area as possible. In addition a recirculating grill opening is located directly underneath the plenum chamber to maintain proper balance between the fresh and the recirculated air. Air delivery is through Pyle-National Multi-vent perforated center ceiling panels.

Electric power for lights and accessories is secured from a Waukesha heavy-duty four-cylinder internal combustion engine with direct-connected mechanically-cooled generator of special design, having heavy-duty roller bearings, fully enclosed. Fuel is obtained from the same cabinet that supplies the ice engine. The propane cylinders are unloaded in sequence by the usual controls. The engine is started and stopped automatically in accordance with the electrical load by means of controls on a panel on the generator unit. This unit is mounted in the same manner as the ice engine.

A 2.5-kva Safety Car Heating and Lighting Company's single-phase 60-cycle motor-alternator is installed to furnish 110-volt current to lights and outlets. This unit is also attached to the center sill. Starting power for the ice engine and generator is furnished by batteries carried in a box under the center sill.

The cars are heated by the latest type Vapor Car Heating Company's zone-control system. This method of car heating employs the use of several zones or areas, each with its own thermostat and thus assures a more uniform temperature throughout the car body. The heating equipment also includes new types of valves and

ABOVE — A Coach Interior—AT RIGHT —One of the Diners

regulators which are designed to give quicker response, thereby avoiding the usual wide temperature differential.

The coach seats, designed and manufactured at Milwaukee shops, are reversible and reclining with the seat and back integral, similar to a rocking chair. When the back is reclined the seat also rises. The seat-reclining motion is controlled by means of right- and left-hand nuts, clamping a small pitman rod secured to the seat base. The seat frame is made of steel tubing bent to shape and welded. A combination of steel springs and rubberized hair is used in the seat cushions and backs.

Considerable attention was given to the interior finish of these cars and, notwithstanding the difficulty in procuring desirable materials, certain definite improvements and innovations were made. The window construction was an outcome of experience obtained in applying the Pittsburgh Plate Glass Company's hermetically sealed double glass unit to cabooses built about three years prior and followed up and tested under adverse climatic conditions. The unit used consists of ¼-in. Duplate safety glass on the outside and ¼-in. Solex plate glass on the inside. The edges of the unit are hermetically sealed. The glass unit in turn is mounted in a rubber extrusion and secured to the unique prefabricated window frame, which also carries the window shades or Venetian blinds.

Robertson bonded metal was used extensively for the inside finish. Linoleum facing, cemented to the bonded metal, is used under the basket rack where it forms an efficient light reflecting surface. The bonded-metal curved ceiling over the basket rack is faced with walnut veneer and extends up to the Pyle-National metal air-duct. Linoleum is also employed at the ends of the car.

General lighting of the car is afforded by 110-volt a. c. fluorescent lights, while a 32-volt Mazda shielded night light is installed at each pilaster panel. The lighting was first studied on a full-size section of the car and various conditions and combinations of fixtures tried out until the desired over-all effect was obtained. The fluorescent lights, located immediately above the windows, are separated by the night lights. A plastic shield is used to hide the direct glare of the fluorescent tubes, with the linoleum mentioned above serving as a reflector for the indirect light. The night lights are shielded by small colored-glass star-shaped ornaments.

Principal Features of the Dining Cars

The auxiliary dining car is an entirely new design which serves as a practical and efficient car for operation next to the dining car. The overflow from the diner is prevented from obstructing service to patrons in the auxiliary dining car, without any appreciable sacrifice in the seating capacity, by means of the full-length side corridor. Service is simplified by locating the kitchenette in the center and employing one waiter in each end.

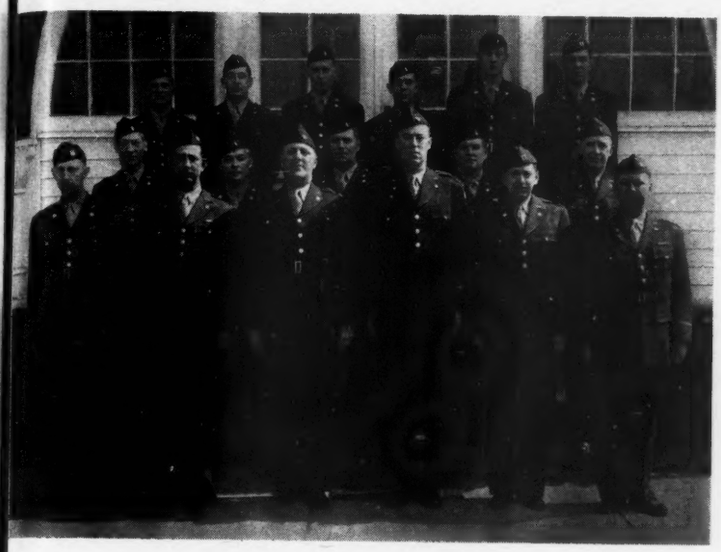
One of the outstanding ornamental features of the auxiliary diner is the glass-enclosed, illuminated flower boxes in which plants are placed for decorative purposes. These flower boxes, which are placed at right angles to the side of the car, are separated by a 12-ft. side-wall panel, unbroken by windows. Against the center of this panel is a large ornamental hand-carved wood plaque flanked by large mirrors. The plaques represent characters in Longfellow's poem, Hiawatha. Similar plaques decorate the walls of the dining cars.

The two full diners include No. 113, or Car A, and No. 114, or Car B. The ceiling of each of these cars is divided into three distinct parts. On the steward's end of Car A the flat bulkhead underneath the blower finish is made up of Guana Costa veneer. The center circular air outlets, including the car-body panel, are painted a light gray. The side panels of the ceiling to the Pyle-National air-distributing panel is made of zebra wood, vertical grain which includes the coving in the car. On dining Car B, the side panels, coving, and the bulkhead, including the flat ceiling under the blower, are all made of Guana Costa veneer. The flat ceiling at the kitchen end of Car A is zebra wood, vertical grain; on Car B, Guana Costa. All coving and side panels on both cars are made on bonded metal backing. The fluorescent light trough shield is made of solid walnut wood with three holly strips inlaid horizontally. The solid walnut trough shields underneath the flat ceilings have a translucent glass shield on the side giving an ornamental effect. The vertical and bulkhead partitions, having gold-tint mirrors mounted in uniformity with the window sill height, give the dining section the appearance of a larger room. The dining car chairs, including 32 in each center section and 16 in each end section, were also made of steel tubing at Milwaukee shops. They are upholstered in either green or gold plush.

Partial List of Materials and Equipment on 31 Milwaukee Main-Line Passenger Cars Built in 1942

U. S. S. Cor-Ten steel for rolled-steel wheels	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Hollow carbon-steel axles	Pittsburgh Steel Company, Allenport, Pa.
Roller bearings on all journals	Timken Roller Bearing Company, Canton, Ohio
Truck and car end castings	General Steel Castings Corp., Eddystone, Pa.
Truck coil springs, alloy steel	American Locomotive Company, Railway Steel Spring Division, New York
Self-locking truck center pins, hand brakes, friction buffers and draft gears	W. H. Miner, Inc., Chicago
Air brakes, Schedule H. S. C.	Westinghouse Air Brake Company, Wilmerding, Pa.
Truck brakes including Rolokron anti-wheel slide device	Budd Wheel Company, Detroit, Mich.
Couplers and yokes, high tensile cast steel	Buckeye Steel Castings Company, Columbus, Ohio
Rubber used in truck construction coupler and buffer stem wear pads,	United States Rubber Company, New York
Bolster vertical shock absorbers and levelator bars	Monroe Auto Equipment Company, Monroe, Michigan
Lateral Snubbers	Houde Engineering Company, Buffalo, N. Y.
Air-conditioning equipment and propane engine-generator set	Waukesha Motor Company, Waukesha, Wis.
Motor-alternator, 110-volt	Safety Car Heating & Lighting Co., New York
Heating and temperature control equipment	Vapor Car Heating Company, Inc., Chicago
Multi-vent air-distributing panels	Pyle-National Company, Chicago
Overhead blower unit	Young Radiator Company, Racine, Wis.
Air filters	Farr Company, Chicago
Storage batteries	Electric Storage Battery Company, Philadelphia, Pa.
Charging receptacles	A. & J. M. Anderson Manufacturing Co., Boston, Mass.
Hardware	Loeffelholz Company, Milwaukee, Wis.
Self-tapping screws	Shakeproof Lock Washer Company, Chicago
Insulation: Stonefelt	Johns-Manville Sales Corporation, New York
Fiberglas, floors of 11 cars	Gustin-Bacon Manufacturing Company, Kansas City, Mo.
Pipe covering	Union Asbestos & Rubber Co., Chicago
Liquid asphaltum	J. W. Mortell Company, Kankakee, Ill.
Wash stands	Crane Company, Chicago
Hoppers	Duner Company, Chicago
Double window-glass units	Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Plush seat covering	L. C. Chase & Co., New York Collins & Aikman Corporation, New York
Drapes	L. C. Chase & Co., New York
Linoleum floor covering	Armstrong Cork Product Company, Lancaster, Pa.
Decorative mirrors	Theodore Diamond, Inc., New York
Ornamental wood plaques	George Kratina-E. Nicholson, Brooklyn, N. Y.
Interior decorative treatment	Otto Kuhler, New York

Ft. Slocum Graduates More T.C. Officers



The third class of Military Railway Service officers to attend the Fort Slocum Transportation Corps Officers' school was graduated on March 27. The work of the school was described in the *Railway Age* of January 30, page 276.

Top Left—An Operating Battalion's Officers

FRONT ROW: Capts. W. E. Faas (g. y. m., N.Y.C.), Wayne Smith (track supr., I.C.), Lt. Col. K. F. Emmanuel (t. m., N.Y.C.), Major J. R. Truden (t. m., N.Y.C.), Capt. V. L. Ernst (matl. acct., N.Y.C.), 1st Lt. R. J. Gordon (y. m., N.Y.C.). SECOND ROW: 1st Lts. H. C. Rowe (safety agt., N.Y.C.), E. A. Teach (dispr., N.Y.C.), H. E. Owens (mach., N.Y.C.), W. E. Cummings (signalman, Interboro R.T.), J. J. Cummings (trav. fireman, N.Y.C.). TOP ROW: 1st Lts. V. P. Gordon (civ. engr., D. & R.G.W.), F. M. Adams (trav. fireman, N.Y.C.), T. G. Bourne (serv. test insp., N.Y.C.), 2d Lts. R. C. Fletcher (clk., N.Y.C.), F. K. Mitchell, Jr. (mach., N.Y.C.), Capt. A. D. Hartzler (supr., Cin. U. T.).

Middle Left—Officers of a Ry. Grand Division

FRONT ROW: Major W. H. Hathaway (div. stkpr., B. & O.), Lt. Cols. W. J. Hotchkiss (supt., Milw.), C. F. White (chf. dspr., B. & O.), Capts. R. H. Coffman (y. m., B. & O.), H. R. Harding (asst. t. m., B. & O.), Major J. S. Major (m. m., B. & O.). SECOND ROW: Capts. J. B. Arter (engr., B. & O.), G. W. Burkley (gen. foreman, B. & O.), R. P. Alexander (supr. psgr. service, P.R.R.), S. L. Morrow (trav. car agt., B. & O.), C. C. Stage (y. m., B. & O.). THIRD ROW: Capts. H. O. Hutson (supr., B. & O.), R. A. Garrigus (gen. foreman, B. & O.). TOP ROW: 2d Lt. W. C. Whitham (rodman, Milw.), 1st Lts. F. H. Drake (sig. supr., D.T. & I.), P. W. Pleasant (electrician), G. W. Padgett (spl. inspr., B. & O.).

Bottom Left—A Shop Battalion's Officers

FRONT ROW: Capts. C. R. Kirkwood (dist. boiler supr., N.Y.C.), E. L. Birt (sec. stkpr., A.T. & S.F.), Major G. A. Almes (r. h. foreman, A.T. & S.F.), Capts. C. B. Stubbs (clk., A.T. & S.F.), Kenneth Jones (foreman, A.T. & S.F.). SECOND ROW: 1st Lts. B. F. Bragg (carman, M-K-T), J. F. Dooley (c. c., A.T. & S.F.), A. V. Sorenson (clk., A.T. & S.F.), A. A. Hill, W. J. Schiffer (boilermaker, N.Y., N.H. & H.). TOP ROW: 2d Lt. A. C. Swan (steno., A.T. & S.F.), 1st Lt. P. W. Laroe (chf. car inspr., C.V.), 2nd Lts. R. F. Schreffler (clk., A.T. & S.F.), J. E. Hanks (shop foreman, T. & P.), H. E. Schreffler (sec. to m. e., A.T. & S.F.), 1st Lt. L. L. Stewart (supr., A.T. & S.F.).

FRONT ROW: Capt. G. H. Spooner (a.g.p.a., A.C.L.), 2d Lt. J. A. Sullivan (International Falls, Minn.), 1st Lt. O. E. Grist. TOP ROW: 2nd Lt. J. M. Donnelly, 1st Lt. R. Bowles (blksmith, N. & W.).

Further Testimony in Non-Op Case

Employees will suffer with everybody else if the railroads do not have funds to maintain and improve their properties

THE wage demand of the non-operating employees, if granted, will have a serious effect upon the railroads, according to railroad presidents and executive officers who testified before the emergency board hearing the case at Chicago. This hearing, which was started on March 1, is expected to last until April 14. Testimony of the railroads on the wage demand was started on March 17 and was completed on March 25. On the latter day the unions presented two witnesses in support of their demands for increased wages for the employees of short lines. The short lines replied to the wage demands on March 25-April 2. Following the short lines, the unions and Railway Express Agency, Inc., and the refrigerator lines will present testimony on the demands for wage increases for the employees of these companies. Later the unions will present evidence in support of the closed shop, following which the railroads will reply to the closed shop proposal.

Railroads Must Have Funds and Credit

It will be disastrous to the public, to the employees and to the owners if the railroads are not permitted sufficient funds and credit to meet their requirements after the war, R. B. White, president of the Baltimore & Ohio, told the board:

"The policy of the Baltimore & Ohio, with reference to fair dealing with its employees as to wages and working conditions is well and, I believe, favorably known, but there is a point beyond which it cannot go; and the increase represented in the demands under consideration here, together with the other demands confronting us, would, if granted, take us far beyond that point. We must, in common with all other railroads in the country, provide for the proper maintenance of our tracks and equipment and also, within the limits of our power, protect our credit. This cannot be done if any part of the demands now under consideration should be granted.

"The demands for an increase in the rate of pay of the non-operating groups under consideration here would, if they were allowed, add $22,399,928 annually to the payroll of the Baltimore & Ohio, based on the hours of employment of the various classes of employees involved for the month of October, 1942. In addition, railroad retirement and unemployment insurance taxes on such an increase in wages would add more than $1,000,000 annually. Furthermore, the demands of the operating brotherhoods, which we must also consider in our calculations would, if granted, add to our payroll the additional sum of $18,430,902, including payroll taxes. Under such circumstances, it would be necessary to adjust the wages of other employees, not covered by agreements, estimated at not less than $550,000. The total annual increase would be $42,500,000, in round figures.

"Due to the unprecedented traffic which the war has brought about, the railroad plant is wearing out faster than it is being renewed. Materials and equipment, which are urgently needed to handle existing traffic and for replacements cannot be obtained in the quantities needed because of priorities. The railroads will not be able to come out of the war in a position to meet post-war trials unless they are permitted to set up reserves and to use their present abnormal earnings to retire indebtedness and to establish credit.

"This means that these war-time earnings cannot be largely absorbed, as is here proposed, in increased wages without inviting financial disaster in the post-war period. The policy of allowing the railroads to use their present earnings as a means of setting their house in order is, I believe, of equal importance to employees, the owners, and the public generally.

"The railroads, after the war, will be faced with increased maintenance costs and need for replacements, due to work they are now obliged to defer because of priorities and the inability to obtain the necessary materials.

"From the standpoint of the employees alone it must be recognized that if the railroads do not have sufficient available funds to maintain their plant and equipment during the war, and sufficient funds to provide the improvements necessary to compete with other forms of transportation after the war, there will be a substantial reduction in railroad employment."

The wage increase sought by non-operating employees on the Chicago, Rock Island & Pacific practically equals the average net earnings of the company for the last seven years, J. D. Farrington, chief executive officer of that railroad, testified. Stating that the Rock Island's problem had been one of money, Mr. Farrington described the improvements made in the property within recent years:

"We determined that even though the railroad had been operated efficiently and economically in the past, it had to be operated even more efficiently and economically to take advantage of all the progress in the art of railroading. We had to secure new equipment; we had to improve our property.

"The willingness on everybody's part to work, a desire on everybody's part to see a better railroad would not produce a better railroad or better operations. We had plenty of willingness and desire, but we had to have money to secure better equipment, materials and supplies to make a better railroad. Fortunately, our revenues improved a little, so that the financial pressure decreased a little.

"We had to improve our track and other facilities. We put in heavier rail, new ties and more ballast. We cut grades and reduced curves. We improved our bridges and built some new ones. We got new roadway machinery and shop equipment so that we could do our work more efficiently. We bought new locomotives and new passenger and freight cars. We bought some Rocket trains to improve our passenger service; then we had to improve our locomotives.

Earnings Needed for Additions

"For seven years we have used our funds for the purpose of improving the property to meet the demands of the service and for reducing our debt. While the holders of equipment trust certificates have been paid their interest, during this seven-year period the owners of the property and of the equity in the property, the stockholders and bondholders, have received nothing. If we had not made these physical improvements, we would have been totally unable to handle the enormous volume of traffic we are now carrying.

"We still have improvements to make to our roadway and structures which will cost money and lots of it. We are wearing out our plant and equipment at an extraordinary rate. We are not buying new equipment because we cannot get it. When materials are available, we must go into the market for new things of every kind and these new things must not be like the old ones; they must be better than the old ones.

"The Rock Island must depend upon its earnings as the source of funds to build up the property. Our indebtedness is going to be scaled down through the reorganization process and we should keep our debt down instead of increasing it. The Rock Island can borrow money on equipment trusts, but it has no general

credit and certainly cannot sell stock. The people who are now investing in railroad securities seem to feel that what is apparently the prosperity of the Rock Island today is only a bubble."

Wage Rises vs. Needed Improvements

Stating that the railroads had financed their own plant expansions while government funds had provided the expansions in most other war industries, William White, president of the Delaware, Lackawanna & Western, testified that the railroads' ability to continue necessary improvements to their properties should not be hindered by constant wage increases:

"I should like to point out that all of the money heretofore spent for plant expansion and improvements either has been or must still be paid by the railroads, whereas in other war industries, the government is providing most or all of the money spent for plant expansion necessary for war purposes. I trust that the money necessary for improvements to come can be provided out of earnings of the industry, and that its credit will not be impaired by adding constantly mounting wage rates to its costs.

"The fundamental question is: what share of revenues should fairly go to payroll purposes? Railroad men have contributed mightily to the war effort and will continue to do so. They deserve fair and considerate treatment. I think they have been getting that.

"Although they are a large part of the railroad industry, the employees are still but a part. They can have no more than their share. They must permit a share of the revenues to be devoted to the reduction of debt, and another share to be devoted to the improvement of the railway plant, and at least a hope that there may sometime be a reasonable return on the funds that have been invested. They must also share with the bondholder and the stockholder who have invested in the property the millions which have provided jobs for all of us.

"It is always to the future that we must look, and nothing should be done that may have disastrous consequences. You must not lose sight of the fact that railroad management bears a triple responsibility, with our responsibility to the public paramount, and our responsibility to our employees and stockholders equal. Each is dependent upon the other.

"Railroad workers are not employed in an industry that has a monopoly on the transportation of goods and persons. Their industry, before the war, had aggressive competition on land and sea and in the air; and after this war, competition will be keener than ever."

Opposed to Abnormal Wages

There is no merit in asking, in an established industry, the high and temporary wage scales paid in war industries, J. B. Hill, president of the Louisville & Nashville, testified:

"It is the desire of this management, and appropriate that employees receive on the average the best wages and working conditions consistent with a just consideration of all factors involved in the railroad industry. The present is no time to undertake to give a degree of permanency to wages or working conditions not compatible during normal times with the ultimate best interests of the railroad industry, including employees. Truly, wages in many defense industries are abnormally high and are viewed with covetous eyes by those whose wages are more or less standardized through fixed employment. Yet these defense industries will pass with the closing of the war, and those engaged therein will naturally shift back to conditions of more stable employment. Very few of the older railroad men are willing, at the present time, to sacrifice their seniority in order to gain the higher wage in some other industry. This fact, alone, argues for the advantages in an industry that is more or less stabilized. By stability it is not meant that with the falling off in traffic all the men now employed in the railroad industry can be retained, but that a normal working force will resume more or less normal conditions.

"From the standpoint of procuring money for improvements, the years prior to the present war traffic conditions were somewhat difficult for many railroads. While the average railroad wage rates tended to increase over the years, and generally the traffic rates tended to decrease, to the benefit of the public, still the payments, with respect both to dividends and bond interest, were declining. Under the 20 cent increase proposed, with a minimum of 70 cents per hour, it is estimated the total addition to the wage bill of the Louisville & Nashville, based on October, 1942, hours of service, would amount to $13,448,640 annually. Operating employees want about 8 million dollars more, or a total of more than 21 million dollars on the L. & N. alone. Such an increase would compare with the net income of the Louisville & Nashville available for dividends, improvements and debt reduction in the big year of 1942, of $19,407,582. It would contrast with the average net income of $4,418,933 for the ten years ending 1940. Such an increase would also compare with the average net railway operating income for the same period of $13,605,247.

"It is doubtful if the public, or even railroad employees, recognize the difficulties involved in keeping the railroad plant abreast of requirements. Railroads are never finished industries. They are under a continuous obligation to make large capital expenditures to improve service. From 1926 to 1942, inclusive, gross expenditures chargeable to investment of the L. & N. for improvements to road and equipment aggregated $129,154,920.

"The net railway operating income of the L. & N. has produced for the 13 years, 1930 to 1942, inclusive, an average return on investment of about 3.12 per cent and the period named includes some of the most prosperous years as well as those of the depression. For the thin years, with the increases proposed, all return would have been completely wiped out. Indeed, for most of such years, the revenues, with wage scales now in effect, would not have taken care of operating expenses and taxes. It requires no extraordinary vision, therefore, to see what a calamity would befall the railroad industry should a further wage increase now be permanently fixed upon it."

Starting Rates of Pay of Industry Are Low

The wide variations in starting rates of pay as between industries, as between urban and rural areas, and as between geographic sections of the country were emphasized by L. L. Morton, assistant vice-president of the Louisville & Nashville, who presented to the Board the results of a study recently published by the United States Bureau of Labor Statistics covering 7,245 establishments all over the nation, employing 248,000 laborers at starting or entrance rates on the first shift. Commenting upon the detailed figures, Mr. Morton said:

"The study showed a common labor entrance rate of 56.1 cents per hour in manufacturing, 53.6 cents in public utilities, 67.4 cents in building construction. The over-all average was 58.5 cents. Slightly more than one-third of the common laborers at entrance rates, that is, slightly more than one-third of the 248,000 laborers in 7,245 plants scattered over the United States, received less than 42.5 cents an hour. In 15 states in the Southeastern and Southwestern regions, the average was 41.1 cents.

"The Louisville & Nashville has enlarged its operations, but we have generally been able to secure additional common labor, most of which we hire at the present minimum wage fixed for the railroad industry. It is our observation that our hourly minimum is higher than the common labor rate in the territory which we serve."

In seven unskilled labor groups—section men, extra gang men, shop, storehouse, pier, platform, and dock laborers—the number of men employed by the Louisville & Nashville increased from 5,059 in December, 1941, to 6,681 in December, 1942, Mr. Morton said. The figures of four other southern lines, he continued, generally showed the same trend; from December 1941, to December, 1942, employment in these seven classes increased from 3,836 to 4,917 on the Atlantic Coast Line; from 4,676 to 5,560 on the Seaboard Air Line; and from 6,057 to 7,315 on the Southern. There was a

slight reduction on the Central of Georgia, from 1,283 to 1,277. For the five railways combined, the witness said, employment in these seven classes of unskilled labor increased from 20,911 in December, 1941, to 25,750 in December, 1942.

Covering these same seven labor groups, Mr. Morton showed the rates of pay of the men who entered or re-entered railway service in the month of October, 1942. Of the 624 men hired by the Atlantic Coast Line in that month, he said, 536 were employed at the minimum rate. Similarly, he continued, all 72 of the men hired by the Central of Georgia, 341 of the 836 hired by the Louisville & Nashville, 1,066 of the 1,108 hired by the Seaboard Air Line, and 982 of the 1,201 hired by the Southern were employed at the minimum hourly rate. Of the total of 3,841 men hired in these seven unskilled groups, 2,997 were employed at the minimum hourly wage, "higher than the common labor rate," Mr. Morton said, "in the territory which we serve."

Wage increases will add to the forces that will push up prices and make it harder to maintain price ceilings, Dr. E. M. Patterson, professor of economics of the University of Pennsylvania, testified. The reasons why the present situation is so critical, Dr. Patterson said, are the rapid increase of our national income; the extent to which this income is being diverted to war production and away from production of goods for civilian use.

Short Line Case

In presenting the wage increase demands of the employees of the short lines, the employees placed two witnesses on the stand, W. M. Homer, and George Cusich, to add to the evidence submitted in the wage case of the employees of Class I railroads. Mr. Homer pointed out that 146 Class II and III line haul and switching and terminal companies are involved and that of these, 112, or 76.7 per cent, are controlled by Class I railroads. A total of 31 steam railroads, he said, are represented at the hearing by the American Short Line Railroad Association and these railroads employ only 4,200 persons. Mr. Cusich presented an exhibit showing the average hourly earnings of employees represented by the 15 labor unions on Class II and III railroads 1936-41.

The first witness for the short lines was J. H. Hunt, secretary-treasurer of the American Short Line Railroad Association. He reviewed the history and structure of wages on short lines. A number of witnesses representing short lines in various parts of the country followed Mr. Hunt to describe the financial condition of the short lines and the effect of the demand for increased wages upon their earnings. Many of the short lines, it was disclosed, have never made any money and in many cases higher wages would cause the short lines to operate at a deficit. Among those testifying were Judson Zimmer, trustee of the Fonda, Johnstown & Gloversville, Gloversville, N. Y.; W. F. Wentz, superintendent of transportation of the New York Dock, Brooklyn, N. Y.; T. H. Steffens, president and treasurer of the Sand Springs, Sand Springs, Okla.; P. J. Murphy, president and general manager of the Lackawanna & Wyoming Valley, Scranton, Pa.; W. H. Blackwell, vice-president and general manager of the East Tennessee & Western North Carolina; Johnston City, Tenn.; C. W. Cockrell, assistant to president, general manager and treasurer of the Midland Continental, Jamestown, N. D.; J. P. Nye, auditor and general manager of the Rapid City, Black Hills & Western, Rapid City, S. D.; J. Gordon Johnson, general manager, Manistee & N. E.

Study Board Favors Uniform Class Rates

WASHINGTON, D. C.

A RECOMMENDATION that Congress should amend the Interstate Commerce Act to direct the Interstate Commerce Commission to establish a uniform classification of freight and a uniform scale of class rates was included in the Summary Report on Interterritorial Freight Rates submitted to the President and Congress March 30 by a majority of the Transportation Board of Investigation and Research set up by Congressional direction under the Transportation Act of 1940.

The board's chairman, Nelson Lee Smith, while concurring in general in the analysis of the facts and issues developed by the majority (comprised of R. E. Webb and C. E. Childe), did not subscribe to the recommendation for legislative action, nor did he join in all of the conclusions set forth in the report.

Not a Statutory Assignment

This rate study was not one of the board's statutory assignments. It developed from commitments made by board members to Congressional committees, and particularly to Senator McKellar, Democrat of Tennessee, late in 1941, after the Senator had expressed a determination to oppose the board's regular appropriation, then pending, unless he received definite assurance that it would enter the controversy over interterritorial rates. In July, 1942, when a supplemental appropriation for the board was before a Senate appropriations sub-committee, Senator McKellar asserted that the existing rate structure had enriched one section of the country at the expense of the others.

Addressing Board Member C. E. Childe, the Senator added, "If you were to report that there was not any discrimination now, your report would not be worth 'two bits' in my mind and in anybody else's mind, because everybody knows that discrimination now exists." Mr. Childe replied that the board proposed to point out to Congress how an end might be brought to the sectional controversy over the rate structure, and the recommendation embodied in the report just submitted is a result of that commitment.

The report reaches Congress at a time when activity on interterritorial rates is unusually intense. As reported elsewhere in this issue, hearings before the Interstate Commerce Commission in its exhaustive investigation of the consolidated freight classification and certain aspects of the class rate structure were resumed in Washington, D. C., this week, while the Tennessee Valley Authority last week submitted its third report on alleged rate discriminations against the South and West.

General Public Policy Weighed

In drawing a distinction between its investigation and that of the I. C. C., the board pointed out that it has not been concerned with the lawfulness of the existing rates or classifications, but instead has considered primarily the economic effects of the present set-up and of possible alternatives, and also the questions of general public policy involved. In its report it has first reviewed the existing structure of interterritorial rates and their relation to intraterritorial rates; second, appraised from the

point of view of the national economy, criticisms that have been directed against the present rate levels and relationships; and third, considered the nature and the probable effects of proposed changes in the existing situation.

Unlike the TVA report, the board's majority concludes with definite recommendations for legislative action requiring the Interstate Commerce Commission to put a uniform classification and class rate structure into effect within a specified time.

"Source of Constant Irritation"

The conclusions drawn by the board's majority are set forth in the report in a series of statements leading up to the proposal for legislation. First recited was the assertion that existing regional differences in class rates "are a source of constant irritation because of the competitive disadvantages which they frequently cause." Differences in rate levels and structures within existing major rate territories result in "difficulties" over interterritorial rates, the report went on to say. To undertake to overcome such "difficulties" by preserving the existing regional differences and developing interterritorial rates on the destination-level basis is "unsound," it declared, because the "basic problem of the reasonableness of differences in intraterritorial rate levels should be dealt with."

Present Differences Not Justified

Adopting as its standard the conclusion that "levels of rates on articles commonly moving on class rates should be made as nearly uniform" as differences in railroad costs and revenue needs will permit, in order to "provide equal opportunity for the economic development of all parts of the country," the board's majority declared, first, that the existing differences in class rate levels in the different territories are greater than can be justified by varying transportation costs, and second, that regional differences in the composition of traffic do not justify existing regional differences in class rate levels.

Going on from these premises, the report proposed that a "uniform freight classification should be established for general application throughout the United States," and that class rate scales should be "uniform in structure" and "as nearly uniform" in levels as transportation costs and carriers' revenue needs will permit. "Classification exceptions" in particular areas should not be barred by the establishment of a uniform general classification, however, it added, where they are "clearly justified."

An approach toward national uniformity in class rate levels could be secured, the report suggested, either by (1) adoption of a uniform scale, by (2) establishing rate territories and class rate scales for each such territory differing from the others only to the extent required by carrier needs and costs, or (3) by adopting a uniform national scale with exceptions tailored to fit the conditions peculiar to particular areas. To the extent that nationwide uniformity in rate levels on particular commodities or classes of traffic is unattainable, rates between areas with different levels should reflect the respective levels in proportion to the movement within each area.

Commodity rates, the report went on to say, should be considered separately and adjusted to the particular circumstances connected with the production, marketing and transportation of the specific commodity. "For essentially local movements, rates may properly be adjusted to local transportation costs and conditions. Where the commodity moves long distances, over large areas, from numerous sources of supply, to competitive markets, the rates should normally be on as nearly a uniform basis as is consistent with differences in transportation costs and the revenue need of the carriers."

Legislation Proposed

The majority's legislative recommendation was preceded by the statement that "any readjustment of freight rates should be effected through existing regulatory agencies, rather than by direct legislative prescription of rates." Legislation proposed would include (1) a declaration of national policy favoring a uniform classification and a generally uniform scale of class rates, and (2) a direction to the Interstate Commerce Commission to carry out this policy by preparing within nine months after adoption of the legislation a proposed uniform classification and scale of class rates "to apply locally and jointly for transportation by railroad of carload and less-carload traffic throughout the United States," by holding hearings on these proposals within three months thereafter, and then by issuing an order effective not later than two years from the commencement of the hearings to require the establishment of the classification and rate scales so developed.

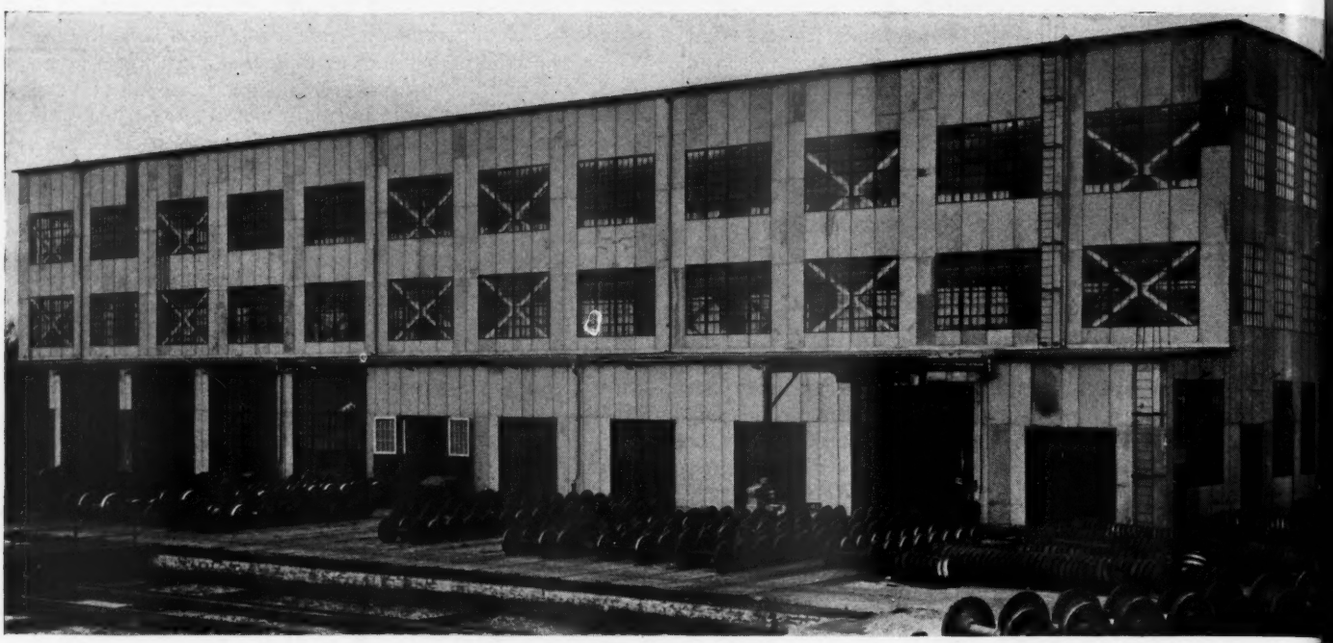
Chairman Smith's minority report stressed the usefulness of the board's study of the interterritorial rate situation in clarifying basic issues that may have become "obscured" in the discussion of a "controversial public question," in comparing existing rate levels, and in "indicating the exaggeration often involved in sweeping contentions that discriminatory freight rates have seriously handicapped the economic development of various sections."

Chairman Opposes Legislation

Accepting the majority's view that "as great a degree of uniformity in the classification of freight and in the structure and level of class rate scales as is justified and practicable should be brought about," Chairman Smith pointed out that the majority has not undertaken to determine the extent to which uniformity would be possible, nor how it can best be obtained. This would require "searching examinations and analysis" of the whole field of rates, costs, traffic movements, carriers' needs, and shippers' circumstances, he added, and the I. C. C. is now investigating many phases of this question. Furthermore, he continued, the commission "now possesses the necessary authority" to bring about whatever degree of uniformity in rates it concludes to be warranted, so that further legislation not only is not required, but might actually add to the difficulty of dealing with the problem under current unsettled conditions by imposing arbitrary and unnecessary time limitations on the commission's procedure.

More Complete Report Soon

The summary report submitted this week will be followed "within a few weeks" by a full report, the board informed Congress and the President. Based on the study directed by Dr. D. Philip Locklin, professor of economics and transportation of the University of Illinois, the detailed data and analysis upon which the board based its conclusions will be included in the complete report, the letter of transmittal stated.



General View of the New Shop Area at Cheyenne, Wyo., Showing, Above, the Wheel and Tank Shop; Center Right, a Part of

Fireproof Shop Buildings on U. P.

Modern structures at Cheyenne have features which promote efficiency in several important shop operations

FOLLOWING a fire which destroyed several important shop buildings at Cheyenne, Wyo., some time ago, the Union Pacific has constructed a wheel and tank shop, a woodworking shop, and a locomotive journal grease packing house of fire-resistant construction throughout and otherwise modern in every respect. Furthermore, taking advantage of the opportunity afforded prior to present war-time priority restrictions on many construction materials, the road designed and re-equipped these facilities in accordance with the most up-to-date practices, insuring not only uninterrupted operations in the future, but operations conducted with the greatest skill and efficiency.

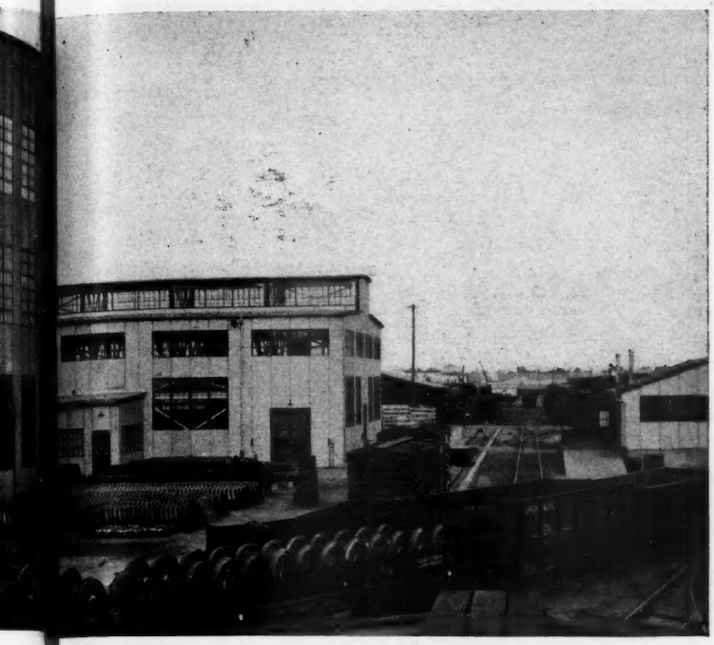
Wheel and Tank Shop

Grouped together in the approximate location of the former buildings, and yet separated sufficiently to form an adequate fire break and served by concrete paving, the new buildings, all of steel frame construction, are enclosed throughout with Ferroclad prefabricated, metal-faced, insulated wall panels, steel sash and doors, and insulated, metal roofs. The wheel and tank shop, which is of the transverse type and served by the former transfer table at this point, has a main bay 266 ft. 4 in. long by 76 ft. 4 in. wide, with a clear height of 51 ft. 7 in. to the underside of roof trusses. This main area is flanked along its west side by a lean-to-type approach bay from the transfer table, which is 20 ft. wide, with a clear height of about 20 ft.; and by a second lean-to-type bay on the east side, which is 111 ft. 8 in. long, 24 ft. wide, and approximately 12 ft. high, and which houses an office, a lunch room, a locker room and a wash room. All units of the building are on concrete foundations and are provided with concrete floors.

As already mentioned, the wall enclosures of the shop are entirely of doors, windows and prefabricated panels of metal-faced insulation, the wall panels having a minimum thickness of insulation of 1 in. between steel plates of 20-gage on the exterior and 24-gage on the interior. The windows, which are in large panels of sectional glass set in steel sash, with steel frames, and with large ventilating sections in each panel, occupy more than 75 per cent of the wall area in the main bay, and thus afford unusually effective daylight for the interior. Wherever ventilating sections are not readily available, mechanical operators of the chain-hoist type are provided. All window glazing is with clear, single-strength B glass, unreinforced, except in the wash and locker rooms, where an obscure glass is used.

The exterior doors of the shop are all of the double-hung type, of steel construction with steel frames, and in each case are fitted with large areas of sash, glazed with wire glass, adding to the general effectiveness of the interior daylighting. In the wheel area, the doors are approximately 12 ft. high, while in the tank repair area, with its through transverse tracks, the doors on both sides of the building are approximately 18 ft. 6 in. high. All interior doors of the building are of either metal or metal-clad wood construction.

All roof areas are decked with metal plates of ribbed construction, securely fastened to the supporting mem-



...the Woodworking Shop; Extreme Right, Grease Packing House

bers and insulated on top with a 1-in. thickness of rigid insulating board, which is weather-proofed with composition built-up roofing.

A feature of the main shop area that adds to the unusually effective lighting possible both day and night, is its white interior finish, all interior wall faces, roof areas and steelwork being painted with a white lead and oil paint above a 6-ft. maroon-colored dado. Another feature of the shop is the adequate artificial illumination provided for night lighting, through the use of mercury-vapor lamps at the level of the lower chords of the roof trusses in the main bay, and at the ceiling level in the approach lean-to bay. All of these lamps, of which there are 55 in the main bay and 11 in the approach bay, are of 400-watt capacity and are so spaced as to eliminate practically all shadows within the working areas.

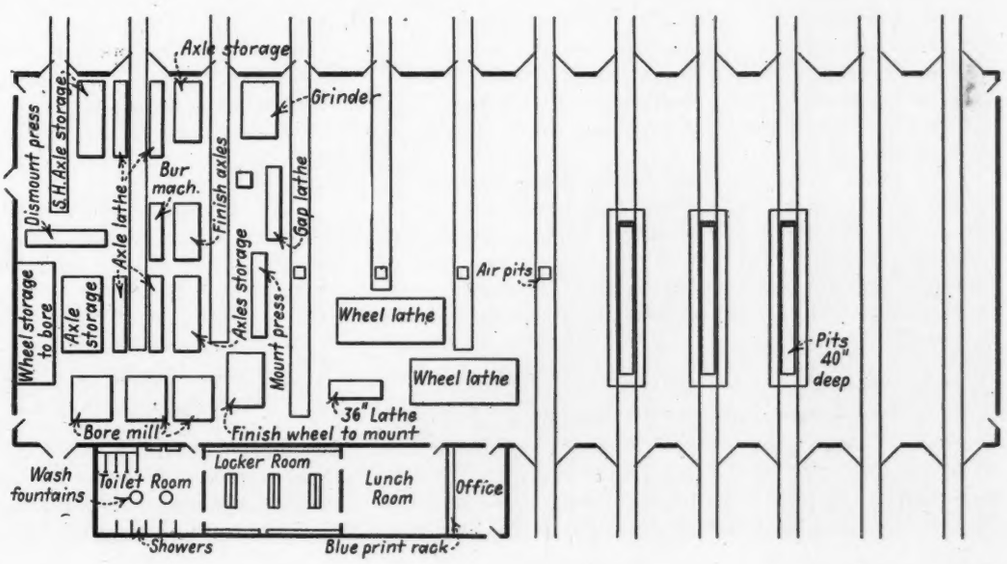
Still another feature of the shop is the heating system installed, which, in combination with the large areas of window ventilators and six large, automatically-controlled roof ventilators, can be used to obtain positive air circulation during the summer. This system employs unit heaters throughout the main shop areas, generally 18 to 20 ft. above the floor level, mounted on the building columns and so directed as to produce a continuous circular movement of the air over the floor area. Altogether, there are a total of 26 such heaters in the main shop area, all of which are supplied with steam from the general shop power housee. During the warmer days of the summer, when desirable, the fans of the heater units, with steam shut off, can be operated as blowers to produce forced cooling circulation. All piping of the heating system, as well as all of the piping of the water and oxy-acetylene gas systems with which the shop is equipped, has welded joints.

The wash room, locker room, lunch room and office in the east-side lean-to area are separated by sound-deadening partitions, and both the wash and locker rooms have suspended ceilings of the same sound-proofing material. The wash room is fitted with two trough-type porcelain urinals, two circular wash fountains, four toilets and four shower stalls, all partitions and doors of both the toilet and shower layouts being of 16-gage pressed steel with a baked-on grey enamel finish.

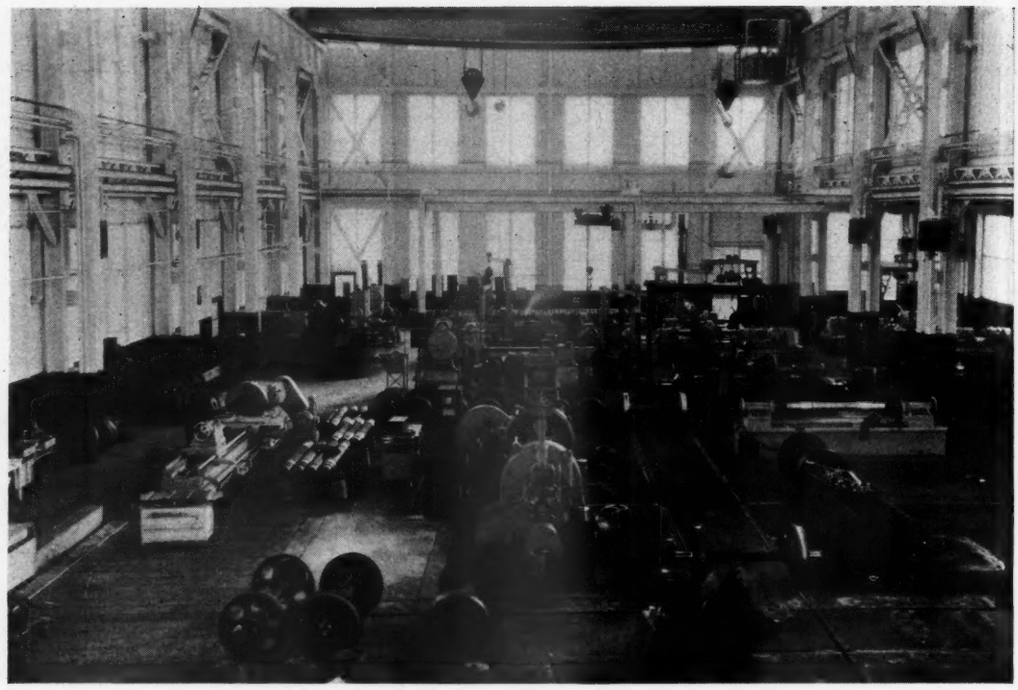
The office, a room 24 ft. long by 16 ft. wide, is comfortably fitted and decorated, the furnishings including metal table and chair sets, metal venetian blinds and overhead fluorescent lighting. All lockers in the locker room are metal.

Operations Well Organized

Wheel work within the shop is confined to the south half of the building, where the most careful attention was given to the layout of machines, tracks, and other facilities to bring about progressive operations with minimum handling and travel. In general, work on freight car wheels is confined to the more southerly section of the wheel area, and work on passenger car wheels to the more northerly section. In the freight car wheel area, the equipment includes a dismounting press, four axle lathes, two car wheel lathes, one engine lathe, two axle burnishing lathes, one car wheel grinder, three boring mills, a mounting press and grinders and other auxiliary tools, these being so arranged that the general route of worn wheels and axles to be reconditioned is eastward across the shop, then a few feet northward, and then



Floor Plan of the New Wheel and Tank Shop, Showing Layout of Tracks and Machines



The Wheel End of the Wheel and Tank Shop—Note Well - Lighted, White Interior

back westward and out to the wheel storage tracks which flank the west side of the building between working tracks.

New wheel and axle storage areas are provided in the layout, and as new wheels or axles are needed, they are brought into the production line and used.

Immediately north of this area is a two-track area for work on the journals of axles from which the wheels have not been removed. Here, where the wheel assemblies are rolled in on one track and out on the adjacent track to the north, the principal shop equipment includes a gap lathe and tools for the dismantling, cleaning and repairing of roller-bearing box assemblies.

Immediately north of this section is a three-track area given over primarily to the conditioning of steel passenger car wheels. Here, at the most northerly track in the area, the wheel assemblies are brought into the shop over a cleaning rack, are stripped of bearing boxes, if equipped, and are moved across the shop to a wheel lathe. On the next track to the south, all journals are magnafluxed, and on the next adjacent track, within the lean-to area, the cleaned and reassembled bearing boxes, if called for, are remounted. Transverse movement of the wheel assemblies between the different tracks in this area is over a cross track directly in front of the wheel lathe, and turning of the assemblies at the various track intersections, as required, is provided for by means of pit-type air lifts.

Tank work is concentrated in the north half of the shop, an area served by five through transverse tracks, the more southerly three of which are equipped with working pits 41 ft. long by 40 in. deep. The pits, of concrete construction, are flanked by broad concrete jacking pads and are well lighted and drained. Trucks removed from incoming tanks on any one of the pit tracks are moved to the other two tracks in the area, which are assigned solely to tank truck work.

To assist in the hoisting and movement of wheels, trucks and tank bodies, the shop is served throughout its length and with an overhead traveling crane of 100-ton capacity, equipped with two 50-ton hooks and one 10 ton hook. This crane, spanning the full width of the main bay, operates on column-supported runways at an elevation of approximately 36 ft. above the floor level.

Supplementing this unit for the handling of heavier loads, a 3-ton capacity electric monorail hoist serves the axle-handling area of the freight car wheel section, and jib cranes or built-in hoisting arrangements serve the different machine tools.

In addition, jib cranes with chain hoists are provided for handling bearing boxes, bearing assemblies and other lighter units.

Woodworking Shop

A new woodworking shop is of the same general type of construction as the wheel and tank shop, with concrete foundations and floor, prefabricated metal-clad insulated exterior walls, an insulated metal roof, large areas of steel sash and a white painted interior. Like the wheel shop also, this shop is heated with unit heaters and is equipped for night illumination with overhead mercury-vapor lights at the roof truss level. The woodworking shop, however, has one clear room, unobstructed by roof-supporting columns, 100 ft. wide, 176 ft. long, and 22 ft. high to the underside of roof trusses. For additional daylighting and ventilation, the roof, centrally throughout its length, is equipped with a monitor 24 ft. wide, with 10-ft. sidewalls and a double-pitched roof.

As in the case of the wheel and tank shop, the main area of the woodworking shop is supplemented on its east side by a lean-to bay, the bay in this case being 24 ft. wide, 134 ft. long and 12 ft. high, and divided by partitions into an office, a tool room, a wash room, a locker room and a lunch room.

The main shop area, as the name implies, is given over to a wide range of mill work, not alone for the car and locomotive departments, but for the maintenance of way and structures department as well. Typical of the classes of work done are the making of wood floor mats, window sash and footboards for locomotives; the making of doors, sash, siding, roofing, desks and cupboards for

freight cars and cabooses; and the framing or sizing of bridge lumber and timbers. In addition, the shop makes various classes of signs and track shims, and does considerable work for the building department.

For carrying out these classes of work, the shop is equipped with two band saws, one matcher, one pony planer, two cut-off saws, one rip saw, two boring machines, one inside molder, one tenon machine, one jointer, one shaper, two mortisers, and the necessary tools for sharpening bits and saws and otherwise keeping the machines in first class working order. A feature of the shop is that all of the wood cuttting and wood boring machines are independently motor-operated and are connected up in a central sawdust collecting system operated by a shavings exhaust fan. All of the ducts in the dust collecting system, which are of galvanized metal, are supported from the roof trusses and lead to a burner outside of the building.

Grease Packing House

Of much smaller size, the new locomotive grease house is of the same general type of construction as the other two shop buildings described. This house, located immediately south of the woodworking shop, is a one-story building, with a basement 40 ft. wide by 66 ft. long and with a clear height above the first floor level of 12 ft.

In this house locomotive journal pads are packed or repacked, stored and shipped out for reuse at points between Omaha, Neb., and Ogden, Utah. In the first operation here, the grease from worn pads is scraped from the screen retainers of the pads with a broad putty knife, and the screens are then washed in a bath of cleaning solution. Following this, the screens go to a reforming station where they are reshaped, ready for reuse.

Reconditioned, the screens are carried a few feet away to three pad-forming stations, where they are backed up with grease, ready for reuse. In this operation, all of the reclaimed grease from worn pads is reused in what are called "half soles." In this half-soling operation, the contact face of the rebuilt pads is made up of new grease to a depth of about one inch, and this is backed up with reclaimed grease. When there is insufficient reclaimed grease for this purpose, or when all new grease in the pads is desirable for any reason, the pads are formed entirely of new grease.

The finished pads are wrapped in oil paper and sealed with a paper tape, and are then stored within the house at one end, ready to be sent out as requisitioned by different points on the road.

How Grease Is Handled

All new grease is received in boxes weighing approximately 65 lb. each, and is stored in the basement of the house, where the temperature is maintained at a sufficiently high level to soften the grease to the point where it can be readily cut and worked when it is to be formed into pads. As needed, the grease containers are brought to the main floor level on the 2,000-lb. electric elevator with which the house is equipped, and are taken to a power cutting knife. This knife, which is operated by compressed air and fully guarded by means of a caging of locomotive front-end mesh, cuts the 65-lb. block into pads of the size desired.

The pad-forming machines, of which there are three, are essentially adjustable sided metal form boxes on a steel table top, with a raising and lowering pressure top. Both sides and top are brought to pad size under compressed air pressure, tightly packing the grease in the form. As a finishing operation, all grease squeezed out over the edges of the pads is cut away, and the face of the screen is primed with new grease to insure that all holes are completely filled. This latter precaution is taken to insure that perfect lubrication is obtained immediately from the new pads when put in use, without awaiting the warming up of the grease under locomotive operation.

The new facilities described were planned and built under the direction of the late Otto Jabelmann, vice president, research and mechanical standards, and B. H. Prater, chief engineer. Actual construction of the foundation and paving was done under contract by the James Leck Company, Minneapolis, Minn. The buildings were fabricated and erected by the Truscon Steel Company, Youngstown, Ohio.

General View Through About Half of the Woodworking Mill

Speeding Up the Training Programs

Freight and Passenger Shop Employees at Beech Grove, Ind., Who Have Qualified as Job Instructor-Trainers—Superintendent Car Shops B. F. Orr Presents Certificates

The New York Central is aggressively promoting study courses to include employees in all its departments

THOUSANDS of New York Central System employees are taking advantage of various courses of educational training offered to them without cost through the company. Many of these are conducted in Railroad Y. M. C. A.'s; others are given in colleges in various cities. The readiness of New York Central employees to take advantage of these opportunities for further training has been warmly commended.

One of the most popular courses is that of job instructor training, which already has registered approximately 3,000 enrollments from Central employees—40 per cent on the Line East; 31 per cent on the Line West; 17 per cent on the C. C. C. & St. L. Ry.; 6 per cent on the Michigan Central and the balance on the Boston & Albany, Pittsburgh & Lake Erie, Chicago River & Indiana-Chicago Junction and Indiana Harbor Belt. Fifty-eight per cent of the employees who enrolled are employed in the equipment department; 19 per cent in the transportation; 14 per cent in the maintenance of way, and the balance in the power, dining service, accounting, pension and traffic departments.

Classes are held on the employees' own time in rooms provided by the company, or the Railroad Y. M. C. A. The course was designed by the Training Within Industry branch of the War Manpower Commission which has district offices at strategic points throughout the nation. The purpose of the course is to teach employees engaged in war work how to instruct a new man on the job, irrespective of the type of work involved, thereby shortening the training period of new employees. It is conducted in classes of from eight to twelve persons and covers a total of ten hours, in two-hour sessions on each of five nights within a period of two weeks. Class leaders, who have had varied industrial experience, are compensated by the War Manpower Commission.

Foremanship Training

Another popular course is that in foremanship or supervisory training. Over 2,000 Central employees have already enrolled for this course. The interest displayed is proportionately the same for departments and units of the system as that displayed in the job instructor training course. The foremanship training course is conducted in classes of from twelve to fifteen persons and consumes thirty hours, one nightly session per week for a period of twenty weeks. It covers the responsibilities of a foreman, avoidance of idle time, maintenance of discipline, putting the right worker in the right job, accident prevention and safety, planning of work, care of materials, tools and equipment and leadership.

Classes were first started in New York State under an arrangement made with the Director, Vocational Training, New York State Department of Education, who furnished instructors to conduct the classes. These instructors were compensated with defense funds supplied by the U. S. Office of Education. Later, the Director of Vocational Training for War Production Workers, U. S. Office of Education, Washington, D. C., made an arrangement with state directors of vocational training in Ohio, Massachusetts, Pennsylvania, Illinois, Michigan and Indiana for the holding of similar classes of Central employees in those states, the expense for instructors being assumed by the U. S. Office of Education.

One hundred seventy-six supervisors in the car and locomotive departments at Albany have enrolled for a special course covering training of foremen. It includes 20 subjects for discussion during a series of 20 planned conferences. It was designed by the National Foremen's Institute, Inc., of Deep River, Conn., to aid supervisory staffs in meeting today's problems. The subjects covered in the course are, briefly: the foreman as a manager, understanding people, the foreman as a leader, eliminating worker irritations, maintaining good working conditions, safeguarding the worker, workers' home problems, training workers on the job, getting along with other foremen, getting along with the man above, the care of equipment, planning the work, maintaining quality standards, handling material, eliminating waste, how costs are kept, cost factors which the foreman can control, putting company plans and policies into action, fore-

man's relationship to management, and self management.

The course is conducted in ten groups with a conference leader and assistant leader in charge of each group. The leaders and assistant leaders are developed from among the supervisors themselves who receive certain data which they must study in advance to prepare themselves for the sessions. Each of the supervisors who take the training receives 20 conference manuals, one at a time. These they study and once a week for a period of twenty weeks, at the close of the day's work and on their own time, they hold a session in the shop, spending from one to two hours discussing the subjects covered in the manuals under the leadership of the conference leaders. Each supervisor is expected to spend from four to six hours between conferences in preparation for them. The expense of the course is assumed by the company and the supervisors donate their own time for conferences and study.

Other Training Courses

From time to time announcements are made by the personnel department of dates and places of tuition-free war training courses available to Central employees at various colleges throughout the country. These courses are sponsored by the U. S. Office of Education and thousands of New York Central System employees have attended. Typical of these are the following:

1. A course now being conducted by Manhattan College, New York City, for 59 Central employees on traffic and transportation control. Forty-five of those enrolled are employed in the freight and passenger traffic departments, the remainder in the transportation, equipment, accounting and engineering departments. This course is conducted in three-hour sessions, two nights per week, for a period of ten weeks (sixty hours). It involves a study of the organization and functions of traffic management with emphasis on the methods of expediting the movement of freight in war time. Attention is also given to packing requirements, routing and tracing of shipments, shipping papers, agencies of transportation, tariffs and federal and state regulations.

2. A course conducted in 1942 at New York University, New York City, in industrial supervisory training, in which 78 Central employees from 16 departments enrolled; most of them hold supervisory positions in the office or shop. It was conducted in 15 weekly sessions of two hours each and covered subjects such as: New needs of training and instruction, how to manage, qualifications of a good supervisor or foreman, today's economic situation, the selection of workers, discovering workers' abilities, need of increasing efficiency, accident prevention, men and machines, maintenance of equipment, records and costs, collective bargaining, how to correct workers, how to handle grievances and relations with supervisors.

3. A course in office management is now being arranged at Manhattan College, New York City. It will be conducted in 2½-hour sessions, two nights per week for a period of ten weeks (fifty hours) and will involve study in the problem of office management, the function of the office, office systems and routines, office correspondence, dictation and transcription work in the office, office filing, office communications, mailing department, supervising office activities, office machines and appliances, control of office equipment and supplies, office forms and office supplies, office manuals; light, noise, and air conditions in the office; office planning and lay-

Training Prospective Women Employees in Passenger Traffic and Ticket Selling Methods

outs, the selection and training of office personnel, compensation and promotion of office employees, reports used by the office manager and budgetary control in the office.

Seven hundred eighty-four Central employees are now enrolled for courses conducted by the Railway Educational Bureau of Omaha, Neb. They are of the correspondence type and provide a plan whereby any employee may subscribe with the Bureau for educational service along the lines of railroad work in which he is particularly interested. The maximum yearly amount any employee pays for this service is $30.00 and most of the programs are set up on a two-year basis. In addition to the texts supplied in the plan, employees are privileged to use the Bureau's railroad library and may call on the Bureau's instructors for additional assistance or instruction. Of the above enrollees, 310 are employed in the signal department; 309 in the equipment department (213 of whom are apprentices); 142 in the maintenance of way department, and 23 locomotive engineers and firemen in the transportation department.

Apprenticeship training is provided for the shop crafts. The courses run for a period of four years, of not less than 260 calendar days. The helper apprenticeship course runs for three years. On completing either course, those who qualify are eligible to become journeymen in their craft and automatically acquire one year's seniority in such craft. Applicants for regular apprenticeship must be between 16 and 21 years of age.

Difficulty has been recently encountered in securing experienced help in certain occupations and special classes have been organized to train employees in some types of positions, such as ticket sellers. The Central recently trained a class of student clerks at New York to become ticket sellers. This course was conducted on company time—eight hours a day for a period of seven weeks. It involved training in salesmanship, courtesy; the study of local, interdivision and other tariffs; local, interline and Pullman tickets; clergy tickets, furlough fares, extra fares, tax on passenger fares, redemption of railroad and Pullman tickets, transportation restrictions on limited trains, government and state orders and making Pullman and coach reservations.

"Productivity Theory" Of Wages Is Attacked

THE contention of the unions representing firemen and enginemen that wage rates of men employed on locomotives should be commensurate with the increased "productivity" of the modern locomotive, made during the presentation of their demands before an emergency board at Chicago, were attacked by witnesses for the railroads. F. G. Gurley, vice-president of the Atchison, Topeka & Santa Fe, testified in part as follows:

"We hear a lot about so-called 'productivity' in all wage movements but I think it is fair to say that the employees involved in this hearing are the chief beneficiaries of the increased productivity of the railroad plant but their contribution to it is subject to close examination.

"For example, an unusually fitting illustration of a plan to decrease the contribution of the men to the world's wealth is the request to place these additional men, these unnecessary employees, on Diesel engines. I think it is entirely fair to say that the background of the Diesel is well demonstrated; that the Diesel locomotive, just like the steam locomotive, has been and can continue to be operated successfully with the conventional crew of an engineer and a fireman. The additional men sought here would result in less tons moved per man. This is all the more impressive when we consider the increase in the number of engineers and firemen if suddenly all of the present steam engines in the United States were replaced with Diesel engines carrying the personnel contemplated by the requests before you. Imagine the impact that would have upon 'productivity.'

"Let me show you the fallacy of the theory of productivity advocated by these employees. I will do that by telling you something about freight power for that part of the Santa Fe lying between Winslow, Ariz., and the Pacific Coast. The grades are rather steep and large locomotives are needed. Some time ago we found it necessary to purchase some locomotives for use in that section. We considered steam locomotives, and we considered also a 5,400 horsepower Diesel. The scarcity of water in the arid section of our line was an argument in favor of Diesels. We decided upon the Diesel but the investigation developed that both the steam engine and the 5,400 horsepower Diesel would pull about 3,500 tons over the grades out there.

"The engine crew on the steam engine would have been two men, an engineer and a fireman. The request before you contemplates four men on the 5,400 horsepower Diesel. Now, inasmuch as each engine can pull as much tonnage as the other, it is easy to figure that the productivity of the steam engine per man employed would be higher than on the Diesel.

"Now let's examine how it is proposed to pay the engineers and firemen on these two engines. The engineers' proposal would pay the engineer on the 5,400 horsepower Diesel a basic rate of $14.13 and the assistant engineer a basic rate of $13.33. The basic rate on the steam engine is $10.53.

"From the standpoint of productivity, if for no other reason, it is impossible to understand the logic of a plan which contemplates that we should pay an engineer and an assistant engineer $27.46 on a Diesel pulling the same tonnage as the steam engine which pays an engineer a basic rate of $10.53. The increase in the Diesel cost over the steam cost would be 160 per cent. Similarly, predicated upon the proposal of the firemen, the increased cost of firemen's wages on the Diesel as compared with the steam engine would be 55 per cent.

"All of this means that the advocates of productivity suggest a pay base which pays the higher wages to the employees on the machine with the lowest productivity per employee.

"Again, the passenger engineer's rate on the steam engines used in the territory east of Winslow, within the limits of the Santa Fe's Coast Lines, is $8.19. Under the engineers' proposal the engineer on the Diesel engine would be paid $11.52, while the assistant engineer would be paid $10.72, or a total payment to engineers of $22.24, an increase of 172 per cent. The fireman's rate on the steam engine in the same territory I have just described is $7.18. The firemen's proposal would contemplate paying two firemen $13.24, an increase of 84 per cent. Here again the productivity of the steam engine per employee is substantially higher than the Diesel; yet under the proposal of the organizations the wages of the employees on the Diesel are to be decidedly in excess of those on the steam engine.

"A striking illustration of how these particular employees have been the beneficiaries of the plant productivity is illustrated by the improved steam locomotives. Yet this has caused the firemen to ask for more money and the inference is that the engineers have similar ambitions. The employees have described how, through the use of higher steam pressure and other improvements in locomotive design, an engine has been developed which in starting will not move more tonnage than previous engines but which will take the train from one terminal to another in less time than the previous engine. This is merely another way of saying that due to the more efficient engine the men devote less hours per day to productive labor.

"Insofar as productivity of the railroad plant is concerned, the new engine I mentioned can be used by another crew to move more tonnage in the time which is thus saved. But certainly no man who labors can claim credit for the creation of wealth when he does not devote his time to its production. If a program is adopted of utilizing men for the purpose of preventing unemployment in connection with new technologies and without giving effect to employment which may be created elsewhere by reason of the new technologies, we have embarked upon a very questionable voyage."

Mr. Gurley also discussed the factors surrounding the

adoption of the Diesel locomotive and the benefits that have accrued to the railroads and the employees:

"Unless the use and further improvement of Diesels is stopped by unsound and unreasonable regulations which affect their economic value they should continue to make a contribution to transportation and should continue to be helpful to the employees and to the industry. I think we should not stifle this new instrumentality of transportation. We do not need four members of an engine crew on a 5,400 horsepower freight Diesel. We don't need four on a 4,000 horsepower Diesel passenger locomotive. We are doing a first-class job with two enginemen, that's enough.

"I think the reason we are having this hearing is that we are a victim of rivalry between labor organizations. It is indeed too bad and in my opinion is evidence of a lack of comprehensive understanding of the underlying necessities of economics in railroad transportation."

There is no place in the war program for nonessential labor assignments, Dr. J. H. Parmelee, director of the Bureau of Railway Economics testified. He said:

"During the first World War the United States raised an army of about four million men. The size of our present army is a military secret, but our leaders tell us that we must prepare for an army of not less than 10,800,000 men and women, two and one-half times as large as in the last war.

"To maintain an army of ten million or more, including the production of food, clothing, ammunition and supplies, will require an army at home several times that size engaged in agriculture, production of war goods, and transportation. Obviously, every ounce of available manpower and womanpower will be thrown into the struggle in one way or another before the war is over. There is no place in the war program for nonessential labor assignments."

As illustrative of government policy in this respect, the witness called attention to an order issued last September by the Interstate Commerce Commission requiring the railroads to operate trains without regard to train-limit laws in effect in Arizona and Oklahoma, when necessary for the prompt movement of freight and the clearing or avoidance of congestion. Continuing he said:

"Thus one artificial and make-work restriction has already gone by the board. Others will doubtless follow. In the light of present conditions and future prospects, every effort should be directed toward helping the war effort."

Stating that the average earnings of road engineers and firemen per hour actually worked or held for work had increased from 97 cents in 1922 to $1.46 in the first ten months of 1942, Dr. Parmelee pointed out that the increased speed of trains, over that period, has improved the earning power of engine crews. He went on to say:

"The carriers pay for more hours than actually are worked because of the fact that, in the main, road engine crews receive eight hours' pay for 100 miles of service. Increased speed has improved the earning power of engine crews. The faster the schedule, the more quickly they make a day's pay.

"Hours actually on duty for road engineers and firemen decreased from an average of 50.2 per week in 1922 to an average of 47.8 per week in 1942. On the other hand, the number of hours paid for increased from an average of 55.3 per week in 1922 to an average of 59.2 per week in 1942. While hours actually on duty showed a decrease of 5 per cent, the time paid for showed an increase of 7 per cent."

R. M. Dilworth, chief engineer of the Electro-Motive Division of General Motors Corporation, described the development of the Diesel engine and compared the Diesel and the gasoline engine. He also traced the background of the application of internal combustion engines to railway motor cars and discussed the transmission problems encountered in that adaptation.

R. T. Sawyer, Diesel specialist of the American Locomotive Company, discussed tests given Diesel locomotives. He contended that weight on drivers is the fair basis for rate of pay.

I.C.C. Hears More on Interterritorial Rates

HEARINGS in connection with the Interstate Commerce Commission's Nos. 28300 and 28310 investigations of the class rate structure and Consolidated Freight Classification, as resumed in Washington, D. C., this week, became in large part a forum for the airing of conflicting views with respect to South-North class rates, thus contributing toward making the past week or so an interterritorial freight rate time in the Capital City. As noted elsewhere in this issue, Congress was meanwhile receiving reports on interterritorial rates from the Tennessee Valley Authority and the Board of Investigation and Research created by the Transportation Act of 1940.

The I. C. C. hearings before Division 2, consisting of Chairman Alldredge and Commissioners Aitchison and Splawn, comprised the follow-through from last November's Columbus, Ohio, sessions; and much of the testimony was in rebuttal to evidence offered there. Generally, the railroad representatives defended the existing rate structure, which was assailed by representatives of the Southern Governors' Rate Conference and other Southern interests. The position of New York, as set forth in a statement submitted on behalf of Governor Thomas E. Dewey, was that the matter of freight rates "is so complicated and has such far-reaching consequences that it should be left to the judgment of the commission," and that the commission's independence of judgment "should not be jeopardized by threats of political action."

Dr. Edwards Defends His Cost Figures

The hearing got under way when the commission presented for cross-examination members of its staff who had offered exhibits in the proceeding. These commission witnesses were Dr. Beatrice Aitchison, daughter of Commissioner Aitchison, who is an associate economist of the Bureau of Statistics, and Dr. Ford K. Edwards, head cost analyst of that Bureau. Dr. Aitchison's exhibit was a study of "Territorial Movement of Carload Freight on May 27 and September 23, 1942"; her cross-examination was very brief. Dr. Edwards on the other hand was cross-examined at some length with respect to his cost studies and his prepared statement of testimony which were distributed early last month.

The prepared statement was Dr. Edwards' defense of his figures against criticisms offered by the statistical witnesses of the parties in interest. Summarizing his cost findings, Dr. Edwards said: "Based on the same assumed loads in each territory, the over-all costs in the South are approximately four per cent below those for the East. The Western costs are six per cent higher than in the East. If the comparison is based on the actual average loads in each territory, the Southern costs are about two per cent below those of the East while the Western costs are about nine per cent higher. These results are based on 1939 costs. They correspond closely to the results based on an entirely different method of approach covering the 10-year period 1930-1939 which showed the Southern costs to be one or two per cent lower than those in the East and the Western costs to be five to seven per cent higher. The above conclusions,

South versus East, can also be reconciled with the fact that the combination of the East, excluding Pocahontas, with the South results in costs for the combined territories which are about one per cent lower than those for the East when taken alone."

Should Pocahontas Costs Be In or Out?

Much of the cross-examination of Dr. Edwards ran to the propriety of excluding the Pocahontas Region from his calculations of Eastern-District costs. In reply he said that he had no specific directions from the commission on that score; but he knew that the characteristics of the Pocahontas lines were different from other Official-Territory lines, and that the commission has from time to time given them separate considerations. At the same time he conceded that the exclusion removes the lines with the lowest costs and best revenue results in Official Territory—"even as to box-car traffic," as the questioner put it. Also, Dr. Edwards conceded that comparisons with figures for the whole of Official Territory, including the Pocahontas Region, would show the Southern Territory costs higher by around six per cent.

Nevertheless, the witness insisted that it was proper to exclude the Pocahontas lines, just as he said it would be proper to exclude Kentucky, with its unusually low costs, from Southern-Territory calculations. He calculated, however, that the effect of the latter would be a change of only one or two per cent. Costs for Southern Territory, excluding Kentucky, are "very close" to costs in the Eastern District, excluding the Pocahontas Region, Dr. Edwards said. After further questioning, which prompted Commissioner Aitchison to remark at one point that he hadn't "the faintest idea what this is all about," the cross-examiners drew from Dr. Edwards general statements to the effect that taken as a whole the amounts paid for transportation in the South are 3.9 per cent higher than they would be if the Official-Territory level applied there; and that a transplanting of the Northern rate basis to the South would mean a revenue loss to Southern roads of approximately $23,500,000 a year.

Dr. Edwards was followed in turn by W. A. Weeks, rate expert for the Missouri Public Service Commssion, and A. J. Ribe, who represented 61 Southern industries, mostly in Alabama. Then came the statement from Governor Dewey of New York, which was presented by M. P. Catherwood, New York State commissioner of commerce.

Statement from Governor Dewey

Governor Dewey had "no pretensions to being a rate expert," saying that any comment he made on rates was based "upon information furnished by others." He then went on to make his assertion that the matter should be left with the commission, adding that New York would present all pertinent facts in its possession and then accept the determination of the commission. Undertaking to correct "wholly erroneous statements" which he said had been made, the New York governor noted the "general absence of reference to the fact that freight rates on most raw materials within the South are substantially lower than the freight rates on the same raw materials within the North." He has not heard it suggested that these raw-material rates should be equalized if the rates on manufactured articles are to be equalized.

Referring to an exhibit offered later by George B. Robinson, director of the Bureau of Planning, New York State Division of Commerce, the Dewey statement said that these data "plainly show that neither the freight rates nor any other factors have prevented the industrial development of the South." It insisted that "many goods of Southern manufacture are freely sold in New York State in competition with goods manufactured right in New York State."

Moreover, Mr. Dewey fears that equalization might be achieved by increasing Official-Territory rates, if it were determined that the financial condition of the railroads would not permit rate reductions to achieve it. He thinks it "deplorable" that the case should have become a controversy between states "in a time of national peril when harmony and unity are so essential for victory." But "New York seeks no special favor or advantage; it does not wish to prevent justice to other states." Nevertheless, the governor does "insist that the rate structure should not be changed if there is not the strongest and most convincing proof that it has now became unlawful."

Political Pressure?—Perish the Thought

J. V. Norman, counsel for the Southern Governors' Rate Conference, cross-examined Mr. Catherwood as to the basis for that part of Governor Dewey's statement which had asserted that "the commission's independence of judgment should not be jeopardized by threats of political action." Mr. Norman registered some indignation at such a suggestion which he considered "improper"; but it all ended in a big laugh when Commissioner Aitchison broke in to say he wondered if all parties would stipulate on the record that there would be no political action.

Railroad testimony was generally in the nature of rebuttal evidence, answering statements of witnesses who had appeared at the previous hearings. Witnesses for the Southern roads included C. L. Hinnant, assistant freight traffic manager, Atlantic Coast Line; W. W. Wolford, assistant freight traffic manager, Seaboard Air Line; L. F. Ormond, assistant comptroller, A. C. L.; R. K. Parsons, general freight agent, Florida East Coast; T. W. Roby, valuation engineer, S. A. L. These witnesses defended the existing rate structure, including Florida arbitraries, and stressed the importance from a revenue standpoint of traffic moving at class rates under the classification. Also, they insisted that recent favorable rates of return of the Southern roads have come after years of low returns and should not be taken as the normal expectancy for the future.

Official Territory lines offered the testimony of W. B. Hill, general freight agent of the Bangor & Aroostook; W. T. Tannehill, member, Auxiliary Committee, Central Freight Association; J. L. Heywood, assistant comptroller, Pennsylvania; Fred Carpi, assistant to general traffic manager, P. R. R.; and Dr. C. S. Duncan, economist, Association of American Railroads.

Roads Cooperate in Improving Rate Structure

Speaking for the Canadian Pacific in Aroostook county, Me., as well as for the B. A. R., Mr. Hill opposed any change in the present class rate structure; but if there is to be a change, the roads he represented want to be permitted as they have in the past to maintain such arbitraries as will protect their present rates and revenues. Mr. Tannehill presented an exhibit portraying action taken during recent years by Official-Territory carriers upon requests for rate adjustments made by

Southern carriers. It illustrated, he said, "the close cooperation between the Southern and Northern carriers in providing rates to meet the ever changing requirements of commerce."

Messrs. Heywood and Carpi offered testimony in rebuttal to the proposal made by representatives of American Trucking Associations, Inc., at a previous hearing that the present l. c. l. rates of the railroads are unprofitable and should be increased. Dr. Duncan had prepared a statement in reply to testimony offered at the Columbus, Ohio, hearing by Dr. John H. Frederick of Austin, Tex., who had undertaken to show that operations of five Texas industries were restricted in their markets by class-rate discriminations. Commissioner Aitchison objected to the form of the Duncan statement, especially where it undertook to paraphrase Dr. Frederick's testimony. On this point, J. R. Bell, Southern Pacific general attorney and commerce counsel, who was directing Dr. Duncan's presentation, engaged in a sharp exchange with the commissioner; but Mr. Aitchison insisted that the witness could not read the statement, although he permitted it to be incorporated in the record as an exhibit.

The A. A. R. economist was cross-examined at some length by Charles McCarthy, assistant general counsel of the Tennessee Valley Authority, who objected to interpretations which the witness' testimony at previous hearings had put on conclusions set forth in a pamphlet entitled "Location of Manufactures, 1899-1929," published by the Bureau of the Census. Mr. McCarthy got into the record certain additional quotations from the pamphlet; whereupon Parker McCollester, representing the State of New York, read in a paragraph or two which he liked.

The presentation of the Southern Governors' Rate Conference got under way with the testimony of T. M. Henderson, commissioner of the Nashville Freight Bureau, who appeared in rebuttal of statements that the South's complaint is a political matter, not supported by Southern industry generally. He undertook to show that organizations "representing a large proportion of manufacturing industry in the South are now, and have in the past fully supported the position of the Southern governors." Mr. Henderson was followed by O. H. Weaver, representing Florida and Georgia shippers, particularly the Georgia Canners Association, T. C. Maurer, representing Jacksonville, Fla., interests, W. R. McDonald, chairman of the Georgia Public Service Commission, and E. L. Hart, traffic manager of the Atlanta Freight Bureau.

Cross-examination of Mr. McDonald brought out that he was advocating uniformity in rates on all traffic—commodity rates as well as class rates. He would not oppose a uniform commodity rate adjustment for Official and Southern territories; for he said the South is not seeking "to hold any advantage we have in that regard." Asked by Mr. McCollester if he would favor uniformity brought about by transplanting the Southern scale to Official Territory, Mr. McDonald said he hadn't proposed that, because he had always maintained that railway costs are no higher in the South than in the North.

Mr. Hart occupied the witness chair for the greater part of Wednesday's sessions, and his cross-examination continued into Thursday. He had a prepared statement and an exhibit designed to show specific rates on specific movements between Southern and Official territories, comparing such rates with what the charges would be if the Official-Territory basis applied. Objection was made to Mr. Hart's reading of his prepared statement, which the objectors insisted was argumentative and also paraphrased testimony of other witnesses. They cited Commissioner Aitchison's refusal to let Dr. Duncan read a similarly-prepared statement, and Mr. Aitchison edited the Hart statement to eliminate portions which he regarded as improper oral testimony.

Meanwhile Wilbur LaRoe, Jr., had made a brief statement on behalf of the Southern Paper Manufacturers Conference, and George N. Beamer, chairman of the Public Service Commission of Indiana, had presented a statement in behalf of Governor Henry F. Schricker of Indiana. Like Governor Dewey of New York, Governor Schricker left the technicalities to the experts, and asked for a fair determination of the issues by the commission. Indiana, said the governor, desires "no unfair treatment in freight rates or otherwise imposed upon any of our sister states and we ask no advantage whatever over any of them, but we do insist that complete justice be given to all with respect to the entire freight rate structure which so definitely affects the economy of every state."

Some Observations on Public Relations Which Stand Up Under the Passage of Time

"Public relations is not publicity. It is a great deal more. When you put the words *public* and *relations* together, you have 'relations with the public' and that term can only mean all of the relations with all of the public.

"The public relations efforts of the railroads in the past were very largely defensive measures. Until a few years ago, we were busily engaged in putting out fires, rather than removing the cause of the trouble and building durably for the future.

"Public relations must start not with what people ought to think but with what they actually do think. An opinion deeply rooted in the public mind is just as much a fact so far as public relations is concerned and just as important as if it were the truth.

"The most obvious lesson any company can learn, but seemingly the most difficult, is that good relations outside must grow from good relations within. If there is any secret in building good public relations, it is that we must begin at home and work from the inside out. A company's public relations program must begin with its own employees. If the immediate family is not satisfied and well-informed, those whom it meets outside will not be satisfied or well-informed.

"To the general public, those who work for a company are the company. The public judge the company very largely by the employees they know.

"Good relations with employees depend on something more than fair wages and fair working conditions. The employees must understand the whys and wherefores of company policies, and they must be made to understand that it is to their interest to support those policies.

"The successful organization from a public relations standpoint is the organization where the humblest employee understands the problems of the management and what it is trying to accomplish."

—From an Address Made Back in 1938 by F. J. Wall, Vice-President, N. Y., N. H. & H.

Purchases Reached Peak in 1942

Carriers and private car lines spent $1,333,000,000 for supplies, but flow is now rapidly diminishing

DETAILS of railway purchasing which are now available for all of 1942 and for January, 1943, substantiate within close limits (2 per cent) this paper's earlier estimate* of last year's railway spending by Class I railroads for materials and supplies and throw more light on the difficulties that these and other carriers are now encountering in obtaining materials under the restrictions of war-time regulations. Aggregate expenditures for materials and supplies in 1942 exceeded those of the previous year and clearly reflected the huge material requirements of the carriers under the war traffic, priorities or no priorities, but less material appears to have been obtained by weight or in terms of either revenues earned or ton-miles of freight handled than in 1941; and deliveries have declined for several months, being 20 per cent less in the last quarter of 1942 than in the last quarter of 1941, and 23 per cent less in January of this year than in January a year ago.

Approximately $1,333,127,000 of materials and fuel, exclusive of new locomotives and cars, was obtained by all the carriers in 1942, and $101,645,000 in January of this year, according to the most recent figures which have been compiled by *Railway Age*. The total for 1942 includes $1,260,400,000 of materials and supplies, exclusive of equipment, received by Class I line-haul railroads; $39,307,000 of materials and fuel received by short lines and switching and terminal companies not supplied by other railroads; $12,942,622 of materials, exclusive of equipment, purchased by the Pullman Company; and $20,478,000 of materials obtained by 16 private car companies from commercial firms for rail line operations.

The figures include materials obtained by carriers to build new locomotives and cars in their own shops, but not the value of new locomotives and cars purchased from equipment builders because of the lack of statistics on equipment building that will harmonize with material. As in previous years, the figures also exclude materials and equipment purchased by other contractors for railway construction and also expenditures by railroads for heat, light, electricity and other utility services. They

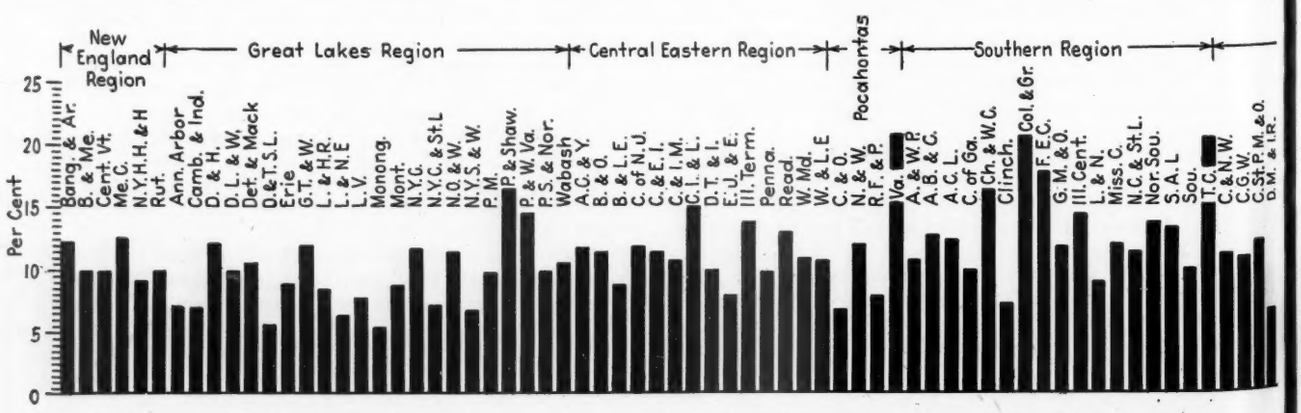
* *Railway Age* of January 2, 1943.

January Purchases—Class I Railroads

	Fuel (000)	Rail (000)	Cross Ties (000)	Other Material (000)	Total (000)	Total Less Fuel (000)
1929	$31,275	$14,400	$9,819	$57,006	$112,500	$81,225
1930	31,235	9,215	10,375	61,675	112,500	81,265
1931	23,280	5,004	7,953	34,763	71,000	47,720
1932	17,624	1,628	2,146	20,234	41,532	23,908
1933	15,927	450	1,353	17,227	34,957	19,030
1934	18,189	1,670	2,197	24,240	46,296	28,107
1935	21,135	1,130	2,111	21,018	45,394	24,259
1936	22,264	1,160	2,851	29,391	55,666	33,402
1937	27,085	3,325	3,932	45,726	80,068	52,983
1938	22,579	1,830	3,867	25,842	54,118	31,539
1939	23,377	483	2,445	27,374	53,679	30,302
1940	24,977	3,529	4,128	45,593	78,227	53,250
1941	27,261	3,464	3,472	45,457	79,654	52,393
1942	32,803	3,075	4,895	69,060	109,833	77,030
1943	41,980	4,866	4,184	50,615	101,645	59,665

Purchases of Materials, Exclusive of Equipment—Twelve Months

	Fuel (000)	Rail (000)	Cross Ties (000)	Other Material (000)	Total (000)	Total Less Fuel (000)
Class I Trunk Lines						
1929	$336,805	$88,735	$143,874	$759,186	$1,328,600	$991,795
1930	308,277	60,980	127,652	538,591	1,035,500	727,223
1931	244,500	41,500	44,000	365,000	695,000	450,500
1932	178,250	15,500	27,550	223,700	445,000	266,750
1933	179,150	10,650	19,750	248,200	457,750	278,600
1934	220,000	33,200	39,700	332,100	625,000	405,000
1935	232,400	20,354	33,780	306,593	593,127	360,727
1936	271,398	37,237	41,360	452,309	802,304	530,906
1937	293,540	44,935	58,361	562,100	958,936	665,396
1938	243,889	23,920	37,911	277,091	582,811	338,922
1939	257,880	38,340	39,760	434,394	770,374	512,494
1940	273,677	45,418	47,995	488,883	855,973	582,296
1941	349,848	52,311	50,039	710,831	1,163,029	813,181
1942	425,712	55,703	63,459	715,526	1,260,400	834,688
All Railroads						
1936	280,572	38,551	45,778	464,305	829,206	548,634
1937	303,200	45,700	61,578	579,544	990,022	686,822
1938	251,284	24,355	40,380	288,297	604,316	353,032
1939	269,352	39,390	43,075	453,309	805,126	535,774
1940	284,318	46,638	51,256	507,566	889,778	605,460
1941	365,048	52,961	53,978	735,785	1,207,772	842,724
1942	439,440	56,190	67,044	737,033	1,299,707	860,267
Railroads and Car Lines						
1939	269,352	39,390	43,075	473,938	825,755	556,403
1940	284,318	46,638	51,256	526,927	909,139	624,821
1941	365,048	52,961	53,978	764,996	1,236,983	871,935
1942	439,440	56,190	67,044	770,453	1,333,127	893,687



Purchases of Materials and Supplies, Exclusive of Fuel, in 1942 Compared to Annual Operating Revenues

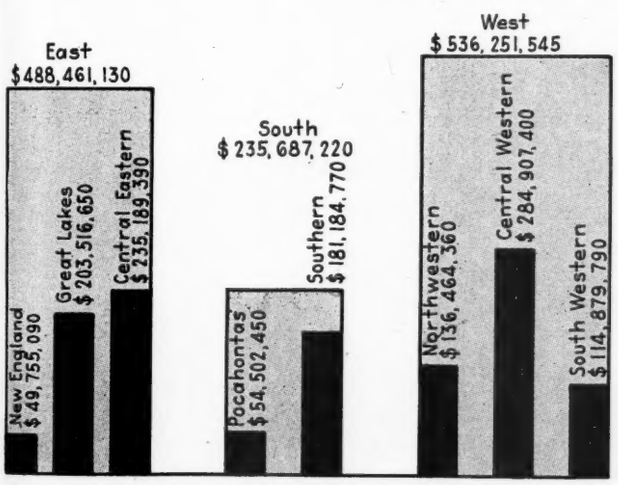
also exclude purchases made in this country by railroads in Canada, Mexico and territories of the United States, as well as railway materials purchased by war agencies for building and operating military railroads in this and other countries.

The totals for 1942, although partially estimated, are based on annual and month-to-month statements of purchases received from railroads operating over 97 per cent of the Class I mileage, together with special reports by independent short lines and terminal companies and private car companies. Purchases represent the delivered cost of materials received from commercial firms.

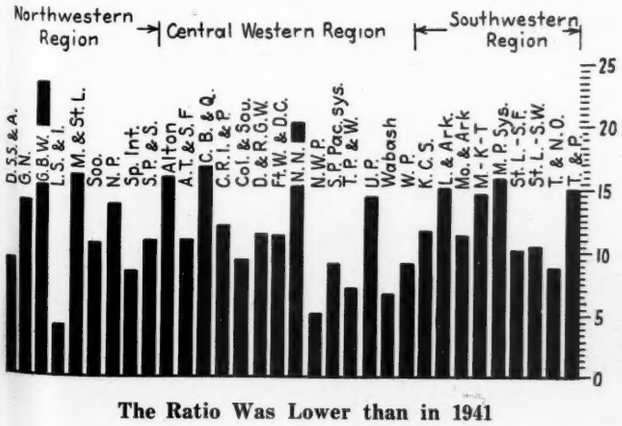
As finally determined, the purchases made last year by the railroads and private car lines included $893,687,000 of materials, exclusive of fuel and equipment, from manufacturers, and $439,440,000 of fuel. Materials, exclusive of fuel and equipment, received from manufacturers exceeded the corresponding expenditures in any year since 1929, and were 27 per cent larger than in 1940, and 60 per cent larger than in 1939; but they were only $21,752,000, or 2.5 per cent, larger than in 1941—an increase which was more than accounted for by the

Purchases by Selected Car Lines—1942

Company	Material and supplies	Cars purchased from outside companies	Total
Armour Car Lines	$823,640	$.....	$823,640
Burlington Refrigerator Express	977,878	.....	977,878
Cudahy Packing	155,085	.....	155,085
Fruit Growers Express	6,991,106	.....	6,991,106
Hanlon-Buchanan, Inc.	7,229	.....	7,229
Merchants Despatch Trans.	444,689	.....	444,689
North American Car	825,971	.....	825,971
Northern Refrigerator Line	194,803	.....	194,803
Pacific Fruit Express	6,852,983	.....	6,852,983
Pullman Company	12,942,682	12,173,352	25,116,034
Railway Express Agency	16,669	.....	16,669
Root Petroleum	24,000	.....	24,000
St. Louis Refrigerator Car	244,263	.....	244,263
Shell Oil, Inc.	85,427	.....	85,427
Socony-Vacuum (Lubrite Div.)	9,900	.....	9,900
Western Fruit Express	2,124,060	.....	2,124,060
Wilson Car Lines	699,746	.....	699,746



Purchases of Materials and Fuel by Railroads of Each Region during 1942—Does Not Represent Expenditures Made with Manufacturers in Each Region



The Ratio Was Lower than in 1941

Materials Received for Maintenance and Repair Compared (Fuel, Rail and Ties Excluded)

Road	Oct., Nov. and Dec. 1942	Oct., Nov. and Dec. 1941	Increase Per Cent	January 1943	Increase over Jan. 1942 Per Cent
Alton	$891,448	$835,892	9	$311,306	28
Alton & Sou.	72,785	69,630	5	14,357	–33
Ann Arbor	131,117	130,396	1	28,025	–10
A. T. & S. F.	5,799,978	9,090,987	–36	1,773,156	–26
A. B. & C.	133,339	127,717	4	.....	..
A. C. L.	2,205,584	2,756,453	–20	766,890	–44
B. & O.	7,390,183	7,698,873	–4	2,153,063	–16
Bang. & Arro.	94,168	138,946	–32	43,707	7
Bing. & Gar.	.....	.....	..	5,682	50
B. & M.	1,508,601	1,806,708	–16	474,908	–22
Cam. & Ind.	23,658	16,281	45	5,339	–15
C. of Ga.	459,551	665,400	–31	190,898	–19
C. of N. J.	1,203,614	1,645,864	–26	428,199	–10
Cent. Vt.	135,746	195,060	–31	34,719	–45
Char. & W. Car.	86,151	219,348	–61	24,228	–68
C. & O.	2,718,686	.....	..	964,441	..
C. & E. I.	572,651	621,642	–8	148,655	–37
C. & I. M.	72,711	229,590	–68	22,907	–59
C. B. & Q.	4,694,769	5,878,016	–21	.....	..
C. I. & L.	.....	.....	..	50,557	–10
C. R. I. & P.	3,275,536	2,660,801	22	.....	..
Colo. & Sou.	292,616	377,425	–22	.....	..
C. & G.	36,492	65,270	–43	11,232	–39
D. & H.	975,678	1,218,124	–21	334,889	–28
Det. & Mack.	20,982	14,341	47	2,799	–30
D. & T. S. L.	23,579	55,997	–58	15,493	14
D. T. & I.	90,687	167,425	–46	24,889	–60
D. M. & I. R.	497,723	553,975	–10	171,543	4
D. S. S. & A.	32,890	102,324	–68	17,392	–56
E. J. & E.	337,140	510,139	–33	142,881	–1
Erie	2,151,174	3,723,386	–43	697,564	–41
F. E. C.	386,923	357,030	8	119,713	11
Ft. W. & D. C.	264,355	262,649	1	.....	..
G. N.	3,329,363	4,737,399	–30	1,130,547	–39
G. M. & O.	440,977	538,561	–18	147,913	–43
I. C.	6,192,782	7,338,503	–16	2,319,968	–5
Ill. Term.	190,906	274,874	–30	59,986	–35
K. C. S.	1,316,040	588,539	120	.....	..
K. C. Term.	136,939	167,953	–21	.....	..
L. S. & Ish.	13,008	22,657	–42	6,471	–22
L. & Hud. R.	35,824	73,242	–51	18,239	–46
L. & N. E.	61,219	152,408	–60	14,354	–74
L. V.	1,444,640	1,224,520	17	403,012	–10
L. & A.	446,195	297,343	50	129,528	78
L. & N.	2,797,370	3,767,777	–25	934,256	–29
Me. Cent.	368,557	597,968	–38	114,256	–37
M. & St. L.	325,197	.....	..	198,376	138
M. St. P. & S. S. M.	897,798	1,344,821	–33	.....	..
Miss. Cent.	.....	.....	..	5,305	–16
Mo. & Ark.	25,140	41,677	–40	10,564	20
M.-K.-T.	2,068,081	1,310,157	58	652,432	60
M. P.	5,068,365	6,109,156	–17	.....	..
Monongа.	40,374	93,519	–57	15,079	–42
Montour	45,471	69,015	–35	8,555	–60
N. C. & St. L.	685,979	802,160	–14	257,242	1
Nev. Nor.	17,083	35,733	–52	2,879	–74
N. Y. C.	13,667,822	18,643,654	–26	4,476,642	–32
N. Y. C. & St. L.	1,081,450	.....	..	378,231	..
N. Y., N. H. & H.	3,075,503	3,251,416	–5	917,938	–16
N. Y. O. & W.	187,357	200,140	–6	54,018	18
N. P.	2,574,693	3,118,201	–17	780,160	–43
N. W. P.	24,586	26,390	–7	5,205	–47
P. R. R. and L. I.	17,904,017	30,843,620	–42	.....	..
Pa.-R. S. L.	65,040	114,929	–43	.....	..
P. M.	583,188	.....	..	208,789	..
Pitts. Sh. & Nor.	.....	.....	..	7,929	–48
Reading	2,404,625	3,280,700	–26	608,180	–55
R. F. & P.	509,454	457,262	10	202,930	10
Rutland	62,279	117,266	–46	15,215	–43
St. L.-S. F.	2,157,432	2,548,379	–15	771,467	–5
Seaboard	2,609,207	2,778,383	–7	.....	..
Southern	6,160,976	4,139,854	49	.....	..
S. P.-Pac. Lines	5,877,224	6,405,127	–9	2,289,056	–10
S. P. & S.	266,857	415,964	–36	104,966	–26
Tenn. Cent.	103,008	107,743	–4	39,509	1
Term. of St. L.	352,516	356,968	–1	127,848	–3
T. & N. O.	1,632,272	1,884,466	–13	511,649	24
T. & P.	1,644,251	1,292,260	27	566,404	–7
U. P.	9,681,012	13,204,728	–27	3,080,508	–25
Utah	14,204	19,869	–28	4,105	–32
Virginian	703,647	810,183	–13	266,043	–13
Wabash	1,497,720	1,876,299	–20	451,149	–57
W. M.	677,953	651,874	3	.....	..
W. & L. E.	474,067	582,611	–18	79,485	–58

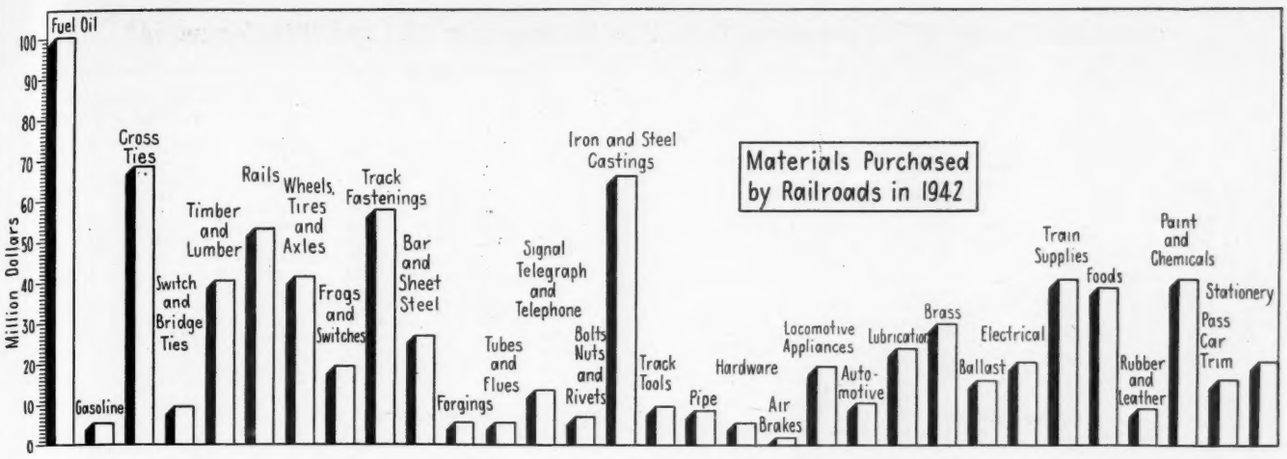
Data not available where spaces left blank.

Classified Purchases, Exclusive of Equipment, by Railroads in 1942—Partially Estimated *

	New England Region	Great Lakes Region	Central Eastern Region	Pocahontas Region	Southern Region	North-western Region	Central Western Region	South-western Region	Class I Trunk Lines 1942	Other Roads 1942	All Roads 1942	All Roads 1941	All Roads 1940	All Roads 1939
FUEL														
Bituminous coal	$19,608,088	$69,422,957	$70,954,009	$16,095,628	$56,751,421	$34,862,437	$34,287,626	$10,439,933	$312,422,099	$10,833,537	$323,255,636	$273,066,596	$215,282,153	$204,240,061
Anthracite coal	122,811	1,369,674	1,552,440	1,011	11,097	40,202	18,835	3,901	3,119,971	15,061	3,135,032	4,055,360	3,569,671	4,949,046
Fuel oil	1,345,249	1,459,046	2,042,893	68,468	4,425,176	7,307,336	60,159,166	22,739,667	99,547,001	2,111,441	101,658,442	78,929,341	57,864,018	53,170,191
Gasoline	358,353	1,170,708	909,745	159,969	736,651	811,672	1,532,887	567,182	6,247,167	162,757	6,409,924	5,710,876	4,570,496	4,363,040
All other	62,877	521,072	530,465	331,972	756,906	677,482	1,469,915	25,337	4,376,026	605,451	4,981,477	3,086,193	3,431,806	2,628,867
Total fuel	21,497,378	73,943,457	75,989,552	16,657,048	62,681,251	43,699,129	97,468,429	33,776,020	425,712,264	13,728,247	439,440,511	365,048,366	284,318,144	269,351,205
FOREST PRODUCTS														
Cross ties	1,191,004	10,243,051	7,834,945	1,713,797	14,117,582	11,558,503	10,841,343	5,958,583	63,458,808	3,584,553	67,043,361	53,978,772	51,257,049	43,073,943
Switch and bridge ties	263,698	989,612	1,803,830	467,524	1,809,477	1,136,823	1,083,700	644,182	8,198,846	774,063	8,972,909	7,409,225	5,070,399	4,702,311
Timber and lumber	1,415,371	5,729,873	6,277,839	1,060,116	7,508,816	5,960,308	7,342,057	3,971,400	39,265,780	920,307	40,186,087	44,972,624	27,996,380	24,856,179
All other	174,740	193,369	260,090	177,935	490,395	1,176,971	2,141,990	2,203,995	6,819,485	9,343	6,828,828	3,806,792	2,502,918	2,344,082
Total forest products	3,044,813	17,155,905	16,176,704	3,419,372	23,926,270	19,832,605	21,409,090	12,778,160	117,742,919	5,288,266	123,031,185	110,167,413	86,826,746	74,976,515
IRON AND STEEL PRODUCTS														
Steel rail (new and S. H.)	1,734,690	7,259,122	7,663,091	3,143,015	8,851,456	5,506,162	16,320,903	5,224,774	55,703,213	486,648	56,189,861	52,959,463	46,634,935	39,390,367
Wheels, axles and tires	1,146,861	8,234,334	6,673,891	1,629,558	5,990,712	4,126,155	10,177,826	4,508,470	42,487,807	442,484	42,930,291	37,244,129	28,448,914	26,225,046
Frogs, switches and crossings	564,271	3,510,998	4,222,770	879,994	2,667,691	1,689,327	2,970,691	1,194,501	17,700,243	2,191,298	19,891,541	19,483,742	14,104,241	10,505,833
Trk. fastenings, trk. bolts, spikes, etc.	1,710,094	8,314,566	8,766,904	2,104,865	6,818,953	6,725,856	14,433,409	5,865,663	54,740,310	944,372	55,684,682	52,664,076	37,741,521	36,505,344
Iron bridges, turntables and struc.	117,697	280,644	701,815	135,367	504,330	571,351	697,746	240,634	3,249,584	257,305	3,506,889	3,711,415	3,208,551	3,078,551
Bar iron and steel, sheets, etc.	344,215	4,558,592	8,928,121	2,626,342	2,954,110	1,908,016	3,953,014	2,261,676	27,534,086	294,520	27,828,606	50,586,252	26,247,644	22,588,686
Forgings, etc., for locomotives	162,266	586,192	461,754	95,710	523,678	387,890	1,632,951	354,570	4,205,011	140,794	4,345,805	3,272,996	2,697,990	2,338,262
Car forgings, shapes, etc.	130,474	2,678,977	4,719,787	1,291,727	830,859	813,349	4,580,892	760,029	15,806,094	154,481	15,960,575	17,026,593	14,419,673	12,989,418
Flues, tubes and superheat	341,219	1,307,901	1,371,291	390,263	869,969	487,069	856,550	664,335	6,288,597	125,153	6,413,750	7,742,476	5,149,380	4,559,164
Interlocking and signal material	1,169,740	3,881,599	5,265,227	913,907	3,021,943	1,575,114	6,255,407	1,338,921	23,421,858	833,272	24,255,130	23,430,162	18,219,943	13,479,137
Telegraph and telephone material	169,422	344,296	1,146,007	158,312	308,377	322,644	1,064,817	121,972	3,635,847	48,504	3,684,351	4,625,412	3,997,698	1,792,724
Bolts, nuts, washers, etc.	400,370	2,542,371	3,433,976	496,559	1,621,487	945,187	2,772,757	1,576,436	13,789,144	307,599	14,096,743	17,060,494	9,528,716	9,649,400
Springs	80,673	699,945	1,202,024	486,824	514,232	694,878	777,809	836,401	5,292,786	107,846	5,400,632	5,658,105	3,949,836	3,389,650
Loco. and car castings, etc.	1,544,718	10,265,063	14,890,157	3,818,042	7,863,983	5,707,013	12,138,881	9,112,904	65,340,761	2,257,996	67,598,757	69,777,305	44,389,588	44,021,517
Track and roadway tools, etc.	363,005	997,515	1,046,050	270,101	1,651,159	1,110,210	2,043,213	1,016,285	8,497,538	239,881	8,737,419	9,287,126	9,754,510	5,799,123
Machinery and repair parts	161,807	609,269	915,681	110,192	572,639	336,729	1,130,053	257,540	4,093,910	37,923	4,131,833	5,290,962	4,356,677	2,897,271
Boilers and Miscellaneous	887,880	2,536,671	2,006,949	721,558	1,497,076	1,246,314	2,417,314	898,192	12,211,954	307,996	12,519,950	12,855,804	8,804,360	7,600,334
Pipe, iron and steel and fittings	265,059	752,342	1,623,649	255,601	1,151,410	716,983	2,126,024	1,144,452	8,035,520	475,432	8,510,952	10,486,692	5,497,448	5,876,601
Hardware	149,076	1,021,794	1,139,326	169,261	738,122	764,760	858,292	969,127	5,809,758	156,894	5,966,652	6,880,927	4,301,190	4,158,416
Hand and small machine tools	418,529	1,537,130	2,122,783	357,238	1,606,525	634,356	2,509,821	876,205	10,062,587	120,435	10,183,022	11,519,928	6,705,099	6,515,641
Air brake material	498,569	3,186,413	9,610,732	1,318,504	2,856,687	2,053,778	3,888,437	3,192,309	26,605,429	202,097	26,807,526	25,133,615	14,494,419	9,180,561
Appliances for locomotives	730,913	3,006,806	3,777,076	763,285	3,445,817	1,909,931	3,349,427	2,363,318	19,346,573	110,376	19,456,949	20,079,843	13,196,167	10,904,587
Automotive materials	636,513	2,024,392	1,280,899	57,763	890,315	1,134,548	3,486,977	476,690	9,988,097	376,572	10,364,669	8,081,046	5,429,246	5,475,766
Total iron and steel products	13,728,061	70,136,932	92,969,960	22,193,988	57,751,530	41,367,620	100,443,211	45,255,405	443,846,707	10,619,878	454,466,585	474,858,559	331,277,746	288,952,403
MISCELLANEOUS														
Cement	21,239	1,546,786	330,009	102,525	129,702	86,087	671,421	167,644	3,055,413	65,041	3,120,454	2,810,273	2,065,595	1,887,386
Lubricating and illuminat. oils, etc.	987,265	4,325,447	4,167,964	1,439,722	3,899,817	3,003,306	6,284,504	1,936,390	26,044,415	1,064,020	27,108,435	22,956,385	17,637,769	17,163,850
Non-ferrous metal	1,415,239	8,022,988	2,996,224	687,410	4,239,813	2,998,508	5,799,080	3,505,644	29,664,906	521,951	30,186,857	33,568,970	21,589,758	20,851,744
Ballast	454,417	2,989,338	3,069,445	1,062,938	2,971,284	1,472,749	3,250,361	1,733,018	17,003,550	187,204	17,190,754	13,644,610	10,827,953	9,426,750
Electrical materials	1,555,785	1,494,917	6,618,679	1,052,802	2,255,720	1,418,746	3,516,763	1,356,183	19,269,595	1,334,591	20,604,186	21,388,843	15,245,482	12,534,154
Stationery and printing	1,489,700	2,888,395	4,574,745	898,865	2,932,908	1,740,755	3,616,094	1,569,501	19,710,963	1,022,523	20,733,486	18,964,939	15,464,351	14,675,895
Commissary supplies	1,683,224	4,881,306	7,042,239	876,735	5,694,672	3,772,271	12,454,835	3,314,001	39,719,283	561	39,719,844	22,945,994	17,289,689	16,434,092
Rubber and leather goods	230,004	1,334,931	1,852,690	199,236	782,832	846,698	2,033,800	693,554	7,973,745	649,128	8,622,873	11,570,054	7,072,190	7,055,428
Glass, paint, chemicals, etc.	1,595,888	4,379,989	9,573,950	1,804,637	5,386,942	3,927,495	9,956,193	4,825,003	41,450,097	976,799	42,426,896	39,833,218	29,502,249	28,799,720
Arch brick for locomotives	186,290	693,967	1,071,646	319,914	511,878	247,544	672,711	502,778	4,206,728	31,391	4,238,119	3,700,861	2,564,907	2,678,352
Passenger car trimmings	494,967	1,215,946	1,667,356	369,141	1,322,859	886,073	1,976,067	792,736	8,725,145	170,496	8,895,641	10,030,776	6,606,024	5,862,153
Loco. train and station supplies	685,713	2,993,570	3,852,080	516,136	1,914,415	1,279,350	3,676,745	1,746,071	16,664,080	911,836	17,575,916	15,720,670	9,974,705	8,726,276
All other materials	685,108	5,512,797	3,236,146	2,901,983	4,782,880	9,885,421	11,678,098	927,678	39,610,091	2,734,740	42,344,831	40,562,312	31,514,204	25,748,856
Total miscellaneous	11,484,839	42,280,357	50,053,173	12,232,044	36,825,722	31,565,003	65,586,672	23,070,201	273,098,011	9,670,281	282,768,292	257,697,905	187,354,876	171,844,656
GRAND TOTAL 1942	49,755,091	203,516,651	235,189,389	54,502,452	181,184,773	136,464,357	284,907,402	114,879,786	1,260,399,901	39,306,672	1,299,706,573	1,207,772,243	889,777,512	805,125,779
Per cent of operating revenues	15.8	16.3	15.3	15.6	17.2	17.4	19.3	15.5	16.9		16.9	22.0	20.0	19.6
GRAND TOTAL 1941	45,666,932	194,894,627	237,798,603	53,343,917	157,767,528	130,897,247	246,058,603	94,601,523	1,163,028,980	44,743,261				
Per cent of operating revenues	19.8	20.1	15.6	17.7	22.6	21.5	24.7	20.5	21.8					
GRAND TOTAL 1940	34,477,391	154,212,518	153,403,722	51,351,918	123,540,553	100,239,289	176,366,387	62,380,942	855,972,720	33,804,792				
Per cent of operating revenues	18.6	19.4	16.1	14.1	18.8	16.6	24.1	17.5	19.9					
GRAND TOTAL 1939	32,367,342	132,117,125	125,231,183	42,740,376	108,099,499	92,455,499	172,530,179	64,832,208	770,373,361	34,752,418				
Per cent of operating revenues	18.0	18.3	15.2	17.7	21.1	20.1	24.5	18.7	19.6					
GRAND TOTAL 1937	39,195,634	165,487,566	171,242,975	44,666,587	117,124,609	116,248,967	227,773,272	77,195,894	958,935,504					
Per cent of operating revenues	21.6	21.6	19.7	17.7	22.7	31.2	31.2	20.2	23.0					

* As compiled by *Railway Age*

Efficiency for Victory



Purchases by All Carriers in 1942 for Selected Classes of Materials and Supplies

higher average increased prices paid for materials. Fuel purchases in dollars exceeded the corresponding purchases in 1941 by $74,392,000, or 20 per cent, and were 25 per cent larger than in 1929. The combined purchases of materials and fuel, exclusive of equipment, made by the carriers and car lines were only $96,144,000, or 7.5 per cent, larger than the corresponding expenditures in 1941—an increase which is largely if not entirely offset by the higher costs paid for materials. Purchases of materials from manufacturers, exclusive of rail and ties as well as fuel, representing materials for maintenance and repairs in the aggregate amount of $770,453,000, were only $5,457,000, or 0.7 per cent, over the corresponding expenditures in 1941—again without making allowances for the higher average prices paid for materials last year.

The all-railroad (Class I, short lines and switching roads) total for 1942 included $323,255,000 of bituminous coal, as compared to $273,066,000 in 1941; approximately $101,658,000 of fuel oil, as compared to $78,929,000 in 1941; and about $6,409,000 of gasoline, as compared to $5,711,000 in 1941. This involved about 123,100,000 net tons of bituminous coal, as compared to 115,525,000 tons in 1941; 1,330,000 net tons of anthracite coal, as compared to 1,564,000 tons in 1941; about 102,000,000 bbl. of fuel oil at 42 gal. per bbl., as compared to 81,160,000 bbl. in 1941; and about 64,500,000 gal. of gasoline, as compared to about 58,200,000 gal. in 1941.

Railroads have, in the past, consumed over 20 per cent of all the timber and lumber produced in the country annually, but lumber has recently become scarce and the railroads were severely limited in the quantities they could obtain last year. Aggregate purchases came to $123,031,000, as compared to $110,167,000 in 1941, but this increase was, to a considerable degree, accounted for by increased material costs. Over-all purchases of forest products included $67,043,000 for approximately 55,500,000 treated and untreated cross ties, as compared to $53,979,000 for approximately 49,916,000 cross ties in 1941. A total of $8,972,000 was spent for 210,000,000 bd. ft. of switch and bridge ties, as compared to an expenditure of $7,409,000 in 1941; while the railroads spent approximately $40,186,000 for about 770,000,000 bd. ft. of timber and lumber, as compared to $44,973,000 in 1941, for over a billion bd. ft. of timber and lumber. Almost every railroad reported a substantially smaller footage of lumber and timber in 1942 than in 1941.

$454,000,000 of Iron and Steel

The railroads have also been cramped in their purchases of iron and steel and are prohibited from purchasing it in large quantities or using it for work not authorized by war agencies—purchases of iron and steel thus reflecting purchases which the railroads were permitted to make and quantities they managed to obtain rather than the purchases they desired to make or would have made in the absence of regulation. Aggregate purchases of iron and steel, exclusive of the metal for building new locomotives and cars in the plans of equipment builders, totalled $454,467,000 in 1942, as compared to $474,859,000 in 1941—a decline of 4 per cent from the expenditures for iron and steel in 1941. Purchases of rails, including some second hand rail, amounted to $56,189,000 for 1,350,000 gross tons, as compared to $52,959,000 for 1,257,000 tons in 1941. Wheels, tires and axles cost the railroads $42,930,000, as compared to

Materials Received by Class I Railroads Each Month, 1941 and 1942

	Fuel (000)		Rail (000)		Cross Ties (000)		Other Material (000)		Total (000)		Total Less Fuel (000)	
	1941	1942	1941	1942	1941	1942	1941	1942	1941	1942	1941	1942
January	$27,261	$32,803	$3,464	$3,075	$3,472	$4,895	$45,457	$69,060	$79,654	$109,833	$52,393	$77,030
February	27,901	31,945	5,297	3,817	3,514	4,837	43,467	63,216	80,179	103,815	52,278	71,870
March	31,121	33,976	5,168	3,770	4,087	6,130	54,070	71,172	94,446	115,048	63,325	81,072
1st Quarter	$86,283	$98,724	$13,929	$10,662	$11,073	$15,862	$142,994	$203,448	$254,279	$328,696	$167,996	$229,972
April	19,203	35,179	4,857	5,831	4,365	6,173	55,444	66,479	83,869	113,662	64,666	78,483
May	25,550	34,651	6,196	6,641	4,369	6,186	59,492	62,880	95,607	110,358	70,057	75,707
June	27,338	35,239	4,868	5,833	4,071	6,168	59,682	59,889	95,959	107,129	68,621	71,890
2nd Quarter	$72,091	$105,069	$15,921	$18,305	$12,805	$18,527	$174,618	$189,248	$275,435	$331,149	$203,344	$226,080
1st 6 Mo.	$158,374	$203,793	$29,850	$28,967	$23,878	$34,389	$317,612	$392,696	$529,714	$659,845	$371,340	$456,052
July	29,700	35,101	4,697	5,573	4,192	5,710	61,117	54,940	99,706	101,324	70,006	66,223
August	30,535	35,417	3,880	4,624	4,345	5,637	64,371	54,932	103,131	100,610	72,596	65,193
September	31,605	36,265	5,511	3,626	4,396	5,152	65,714	54,156	107,226	99,199	75,621	62,934
3rd Quarter	$91,840	$106,783	$14,088	$13,823	$12,933	$16,499	$191,202	$164,028	$310,063	$301,133	$218,223	$194,350
October	34,343	37,729	2,965	3,771	4,398	4,647	70,249	56,759	111,955	102,906	77,612	65,177
November	31,062	37,067	3,189	4,265	4,115	4,093	62,058	49,464	100,424	94,889	69,362	57,822
December	34,229	40,340	2,219	4,877	4,715	3,831	69,710	52,579	110,873	101,627	76,644	61,287
4th Quarter	$99,634	$115,136	$8,373	$12,913	$13,228	$12,571	$202,017	$158,802	$323,252	$299,422	$223,618	$184,286
Last 6 Mo.	$191,474	$221,919	$22,461	$26,736	$26,161	$29,070	$393,219	$322,830	$633,315	$600,555	$441,841	$378,636
12 Months	$349,848	$425,712	$52,311	$55,703	$50,039	$63,459	$710,831	$715,526	$1,163,029	$1,260,400	$813,181	$834,688

* As compiled by *Railway Age*

Selected Classes of Purchases by Individual Railroads in 1941 and 1942 Compared*

	Cross Ties		Timber and Lumber		Rail		Iron and Steel Products		Materials, Less Fuel			
	1942 Units	1941 Units	1942 Bd. Ft.	1941 Bd. Ft.	1942 G.T.	1941 G.T.	1942 $	1941 $	1942 $	1941 $	Increase Per Cent	Per Cent Op. Rev.
A. C. & Y.	62,232	47,753	673,245	979,528	100	801	196,451	201,970	440,414	428,923	3	12.6
Alton	379,476	307,720	....	....	7 989	4,599	2,592,995	1,790,864	4,981,262	3,519,589	41	15.7
Alton & Sou.	16,703	20,798	....	....	862	1,051	121,482	161,187	233,866	267,313	−13	....
A. & W. P.	194,175	174,234	977,503	1,408,591	3,817	2,494	978,858	931,126	1,812,535	1,730,814	5	10.4
Ann Arbor	39,005	37,923	50,551	61,643	307	20	140,983	145,761	354,098	350,918	1	6.9
A. T. & S. F.	2,357,002	2,063,539	39,138,817	83,720,175	183,187	40,882	27,840,400	21,779,426	42,850,881	37,133,478	15	11.8
A. B. & C.	120,224	68,472	738,300	762,632	2,416	1,005	416,759	276,484	813,222	634,619	28	13.4
A. C. L.	953,337	....	16,203,715	....	8,228	....	6,678,536	5,451,789	13,874,128	11,216,193	24	12,0
B. & O.	....	1,719,664	....	31,360,522	....	31,470	20,151,307	18,730,744	34,511,129	32,006,120	8	11.2
Bang. & Aroo.	89,454	90,841	....	....	2,585	1,648	429,247	329,843	830,124	709,300	17	12.2
Bess. & L. E.	39,859	67,942	646,471	934,511	4,144	1,391	1,211,869	1,308,009	1,847,717	2,137,056	−13	8.6
B. & M.	472,317	349,417	6,693,237	6,674,204	11,681	10,709	3,864,395	3,864,270	6,601,690	7,150,210	6	9.8
Cam. & Ind.	16,465	17,721	17,036	27,780	83	300	71,776	106,227	139,010	165,642	−15	6.7
C. of Ga.	255,698	391,308	3,555,304	5,403,442	4,559	9,414	1,384,630	1,677,213	2,882,840	3,559,129	−18	9.8
C. of N. J.	171,102	243,045	6,831,520	9,623,851	5,405	5,285	3,626,867	3,783,843	6,624,093	6,762,690	−2	11.6
Cent. Vt.	34,237	21,060	925,177	447,509	949	829	....	....	816,313	861,891	−5	9.9
Char. & W. Car.	134,806	....	527,766	....	782	....	285,962	461,670	629,048	748,312	−16	16.1
C. & O.	547,682	685,491	9,001,750	11,143,915	30,852	34,939	7,444,603	9,857,476	13,587,229	15,785,463	−13	7.5
C. & E. I.	130,074	128,165	2,348,154	2,114,148	4,697	6,039	1,603,865	1,632,881	2,683,672	2,626,007	2	11.2
C. & I. M.	47,476	23,020	679,924	1,255,052	982	1,848	271,171	456,086	648,680	892,440	−28	10.5
C. & N. W.	1,036,159	853,397	15,394,606	36,223,701	15,288	17,316	7,723,277	8,905,298	15,217,321	16,857,514	−10	11.0
C. B. & Q.	2,289,525	1,866,837	24,741,723	36,652,608	23,423	52,034	10,866,234	11,972,247	27,662,822	29,514,029	−9	16.7
C. G. W.	308,853	295,354	1,797,378	2,200,352	5,405	4,234	1,313,653	1,430,778	2,634,500	2,687,370	−1	10.6
C. I. & L.	....	....	....	....	....	....	591,208	882,344	1,725,479	1,513,746	14	14.8
C. R. I. & P.	796,418	683,920	7,733,653	9,530,104	....	41,081	8,417,513	7,423,732	16,176,939	13,720,231	18	11.8
C. St. P. M. & O.	259,322	257,775	2,746,692	4,386,967	3,540	2,046	1,257,204	1,417,203	2,788,497	3,051,165	−9	11.8
Clinch	81,817	66,325	686,219	671,432	2,306	1,054	459,723	571,851	867,267	924,180	−6	7.0
Colo. & Sou.	78,280	117,617	88,009	890,983	2,406	1,023	555,517	524,937	982,485	942,600	4	9.4
C. & G.	39,717	28,256	....	....	1,912	....	159,545	104,109	318,090	214,382	48	20.8
D. & H.	204,648	130,219	4,802,610	4,236,254	13,453	10,126	3,532,674	3,233,599	5,470,283	4,804,021	14	12.0
D. L. & W.	264,244	227,061	5,310,238	9,956,693	8,593	6,774	3,729,098	4,343,956	7,065,494	7,768,013	−9	9.8
D. & R. G. W.	174,059	114,503	3,649,540	6,573,211	9,914	11,646	3,848,611	3,860,854	6,155,093	5,797,287	6	11.2
Det. & Mack.	25,748	32,355	190,916	37,424	....	190	56,200	38,155	126,016	91,588	37	10.6
D. & T. S. L.	23,000	11,495	....	....	100	198	97,022	120,143	220,739	219,474	1	5.3
D. T. & I.	13,680	....	....	....	2,319	....	497,434	366,639	754,635	225,859	230	9.1
D. M. & I. R.	....	....	....	....	....	....	....	....	2,650,233	2,669,783	−1	6.1
D. S. S. & A.	106,734	88,152	....	260,160	1,118	2,318	213,881	219,436	408,744	386,312	6	9.6
E. J. & E.	236,152	182,654	1,771,157	2,685,510	5,624	2,471	1,411,453	1,208,573	2,516,117	1,339,383	87	7.5
Erie	....	....	....	....	....	....	6,184,502	7,653,454	11,430,543	13,263,721	−14	8.6
F. E. C.	548,167	235,559	631,135	842,708	10,022	....	1,328,226	690,051	3,644,458	1,584,339	130	17.5
Ft. W. & D. C.	77,091	128,743	677,450	636,193	768	145	1,328,226	413,713	1,246,909	1,034,086	21	11.4
G. T. W.	325,000	398,150	4,160,470	5,368,000	6,102	2,407	....	2,279,970	3,643,211	4,508,740	−19	11.8
G. N.	2,613,275	1,730,536	10,931,148	20,843,026	16,110	23,016	7,870,422	7,848,309	22,765,373	20,968,710	8	13.8
G. B. W.	115,374	152,708	202,984	272,352	2,660	500	274,416	170,322	530,243	407,067	30	23.0
G. M. & O.	768,603	342,386	2,925,845	2,908,246	8,482	5,854	1,630,946	1,402,282	3,853,392	2,710,234	42	11.6
I. C.	2,240,975	2,229,384	....	....	54,032	56,130	14,841,157	14,612,841	30,031,869	27,683,093	8	14.1
Ill. Term.	....	61,700	....	....	....	1,420	....	....	1,218,913	1,117,563	8	13.7
K. C. S.	662,579	467,943	2,768,740	2,056,224	6,586	8,522	2,008,720	1,742,867	3,908,719	3,177,177	23	11.4
K. C. Term.	....	....	....	....	....	....	....	....	....	....	....	....
L. S. & Ish.	40,368	37,955	166,150	423,344	....	....	61,888	126,475	136,712	243,320	−44	3.9
L. & Hud. R.	4,153	8,546	91,198	45,523	1,013	....	189,129	166,805	275,973	243,001	13	8.1
L. & N. E.	13,463	8,861	....	....	1,434	....	223,133	317,813	377,067	471,757	−20	6.1
L. V.	128,309	183,166	515,555	1,234,972	7,306	1,833	....	....	5,893,853	4,874,356	20	7.6
L. & A.	413,204	293,479	4,022,431	3,543,950	5,923	5,826	985,796	834,537	2,322,114	1,713,797	35	14.8
L. & N.	1,123,686	744,577	15,745,897	24,969,124	27,823	32,649	7,358,707	9,539,764	14,809,178	16,183,250	−8	8.8
Me. Cent.	236,257	157,503	3,701,398	3,814,012	1,489	....	878,823	1,094,285	2,118,791	2,159,623	−2	12.5
M. & St. L.	....	....	....	....	....	....	734,755	800,564	2,133,980	1,964,124	9	15.7
M. St. P. & S. S. M.	562,301	506,928	....	2,998,252	9,334	9,780	....	3,054,173	4,478,994	5,174,166	−13	10.5
Miss. Cent.	49,132	50,551	278,507	163,926	508	....	69,086	46,737	192,627	179,418	7	11.6
Mo. & Ark.	123,267	124,194	133,911	404,350	....	570	....	....	192,047	202,737	−4	11.1
M-K-T	....	....	....	....	....	....	3,349,060	1,870,558	8,501,933	4,303,373	98	14.5
M. P.	1,538,424	1,827,148	....	....	44,779	53,298	....	....	35,151,372	29,611,625	19	15.3
Mononga	49,593	34,751	102,445	86,331	460	400	153,795	198,318	356,526	371,749	−3	5.1
Montour	7,714	8,012	44,221	208,124	250	500	141,260	156,841	230,154	248,685	−7	8.5
N. C. & St. L.	224,963	188,344	4,521,938	4,758,985	7,529	1,967	1,715,941	1,595,494	3,405,892	3,016,162	12	11.0
Nev. Nor.	34,749	39,741	32,415	172,067	142	409	54,510	130,328	139,561	249,926	−44	20.0
N. Y. C.	....	....	....	....	....	....	37,587,501	42,470,417	71,921,187	71,663,355	1	11.4
N. Y. C. & St. L.	486,975	337,220	4,982,706	4,085,497	9,199	7,447	3,181,476	2,879,044	6,089,241	5,177,225	17	6.9
N. Y. N. H. & H.	147,289	141,929	787,800	12,293,164	19,260	15,136	6,846,185	5,911,575	14,208,021	12,469,419	13	9.0
N. Y. O. & W.	88,266	22,521	496,523	172,279	....	....	499,742	310,151	826,372	506,940	63	11.1
N. Y. S. & W.	1,250	....	2,500	292,149	290	912	170,956	187,383	288,894	361,846	−20	6.5
N. & W.	247,233	404,543	6,192,317	12,604,103	31,584	37,694	9,540,392	12,892,185	16,683,876	20,771,564	−18	11.9
Nor. Sou.	328,017	211,952	471,321	2,857,943	4,090	2,571	540,648	434,256	1,066,379	902,451	18	13.5
N. P.	1,697,224	1,184,824	27,788,152	31,033,053	29,572	44,324	8,480,749	8,123,748	16,134,898	13,810,186	17	13.6
N. W. P.	....	....	....	....	....	....	....	....	242,676	182,981	33	4.7
Penna. Sys.	2,892,631	2,523,688	63,514,709	96,619,912	105,153	113,501	50,285,826	70,624,222	87,412,560	105,695,377	−17	9.8
P. M.	312,216	444,637	3,280,026	6,417,700	7,250	4,691	2,092,252	2,672,894	4,259,841	4,949,910	−14	9.6
Pitts. & Shaw.	22,220	23,806	69,959	77,012	923	142	119,434	91,008	203,871	146,192	39	16.3
Pitts. Sh. & Nor.	12,574	26,465	110,455	85,563	....	608	61,524	130,169	138,467	223,352	−38	9.4
Pitts. & W. Va.	58,455	69,670	230,312	408,903	2,313	1,891	512,422	319,827	924,748	638,462	45	14.3
Reading	367,657	169,704	12,277,285	13,169,113	4,908	1,801	8,697,558	8,765,057	13,149,518	12,090,436	9	12.8
R. F. & P.	170,041	213,004	852,336	1,021,459	1,765	1,233	1,072,490	837,460	2,138,327	1,705,024	25	7.6
Rutland	24,773	23,855	543,364	1,011,575	623	523	230,190	265,916	424,743	485,779	−12	9.9
St. L.-S. F.	742,791	704,275	14,558,248	17,509,334	12,408	14,147	4,796,932	6,447,409	8,905,673	10,691,901	−16	10.0
St. L. S. W.	250,047	322,467	5,854,970	6,979,578	9,642	16,573	3,004,991	3,999,704	4,967,396	5,919,934	−16	10.2
Seaboard	1,115,081	1,012,223	....	....	19,062	17,877	....	....	13,271,753	12,820,675	4	13.0
Southern	1,465,713	1,726,451	35,194,598	43,946,707	54,516	42,316	13,232,557	12,301,972	26,990,461	24,927,106	8	9.9
S. P.-Pac. Lines	....	....	....	....	....	....	....	....	32,785,329	25,130,359	30	8.9
S. P. & S.	....	....	....	....	....	....	1,301,506	1,372,054	2,401,940	2,490,315	−1	12.3
Tenn. Cent.	129,820	101,752	959,544	904,285	1,605	1,023	299,677	192,753	813,596	534,227	52	20.3
Term. of St. L.	29,384	36,539	1,582,933	....	2,832	2,528	1,066,830	....	2,162,687	1,906,785	13	....
T. & N. O.	....	....	....	....	....	....	....	....	8,606,834	7,101,851	20	8.4
T. & P.	522,598	....	6,076,161	....	16,515	....	4,714,264	....	7,629,836	....	....	14.9
U. P.	2,807,358	1,819,530	34,193,530	42,115,362	65,023	86,874	28,453,693	27,466,760	50,193,976	45,521,833	10	14.2
Utah	7,597	1,781	....	....	....	....	30,044	40,628	84,181	82,641	2	6.4
Virginian	281,273	....	....	....	10,049	....	4,136,503	....	5,435,972	3,415,384	59	20.5
Wabash	377,255	534,509	4,748,945	5,355,361	11,174	14,756	5,901,285	5,020,049	8,147,506	8,359,208	−2	10.3
W. M.	128,332	237,702	2,435,116	1,023,860	5,561	5,272	2,115,755	2,415,388	3,572,618	4,112,798	−13	10.7
W. P.	230,319	485,059	2,882,569	3,785,789	4,848	3,713	1,450,946	1,165,932	3,340,079	2,971,749	12	8.7
W. & L. E.	....	444,593	....	4,707,362	....	6,990	1,536,268	2,003,342	2,545,895	3,324,401	−23	10.5
Spokane Intl.	50,213	57,736	245,622	473,529	....	....	43,476	23,204	141,516	90,736	55	8.3
T. P. & W.	10,001	....	91,029	....	....	....	108,833	....	227,970	....	....	7.0

* Data not available where spaces left blank

** Excluding switch and bridge ties †Including rail

Purchases from Commercial Firms by Short Lines and Switching and Terminal Companies in 1942†

	Fuel	Rail (new)	Cross ties	Misc.	Total
Akron & Barberton Belt..	$32,799	$.....	$19,449	$54,677	$168,828[1]
Albany & Northern.....	13,173	.....	8,400	3,200	24,773
Angelina & Neches River.	7,579	.....	18,488	3,551	29,618
Apache	23,551	.....	13,344	9,440	46,635[2]
Bath & Hammondsport....	2,490	.....	2,275	1,498	6,263
Bauxite & Northern.....	15,465	.....	3,413	38,490	57,368
Belt Ry. of Chi.	64,582	33,555	39,750	889,168	1,027,055
Belfast & Moosehead Lake	20,810	.....	616	4,303	25,729
Big Creek & Telocaset....	.....	.....	.....	.....	.....
Bingham & Garfield*.....	26,284	121,025	48,761	257,890	453,960
Birmingham Southern	45,501	.....	11,078	199,163	257,460[3]
Bois D'Arc & Southern....	.....	.....	722	.....	722
Buffalo Creek & Gauley..	18,515	.....	9,380	37,105	65,000
Buffalo, Union-Carolina....	5,157	5?8	2,727	3,000	21,112[4]
Carolina & Northwestern..	74,697	.....	81,678	30,527	186,902
Carrollton	4,065	.....	.....	3,501	7,566
Central Indiana	6,022	.....	29,214	4,888	40,124
Chattahoochee Valley	18,106	.....	14,535	2,351	34,992
Cheswick & Harmar.....	4,181	.....	7,031	6,915	18,127
Chicago & West. Ind.	167,156	47,117	48,648	475,532	738,453
Chicago & Calumet River..	3,477	.....	1,875	2,058	7,410
Chicago Heights Term. Trans.	.....	.....	.....	.....	120,204[5]
Chicago, West Pull. & Sou.	89,269	.....	3,041	85,064	177,374
Cincinnati Union Term. ..	212,134	1,178	4,530	486,270	704,112
Colorado & Southeastern..	1,638	.....	1,033	250	2,921
Colum., Newberry & Laurens	43,628	.....	21,783	21,369	86,780
Copper Range	21,605	.....	10,721	11,769	44,095
Dansville & Mt. Morris...	3,693	.....	8,188	4,341	16,222
Danville & Western.....	23,577	.....	30,842	32,820	87,239
Des Moines Union.....	86,441	.....	12,575	30,045	129,061
Duluth & Northeastern....	21,331	.....	.....	6,252	27,583
Duluth & Southern.....	45,619	.....	54,100	29,391	129,110
East Erie Commercial....	3,105	.....	1,922	2,412	7,439
East Jordan & Southern...	453	.....	3,751	.....	4,204
East Tenn. & West. N. Car.	15,087	.....	14,220	13,982	43,289
Fernwood, Columbia & Gulf	24,162	.....	17,794	10,028	51,984
Galveston, Houston & Hend.	31,957	.....	58,296	84,654	174,907
Galveston Wharves	20,554	.....	15,933	107,012	143,499
Great Western (Denver)..	21,430	.....	19,576	21,826	62,832
Greenville & Northern....	4,211	.....	2,975	1,764	8,950
Gulf & Northern.....	3,788	.....	3,982	584	8,354
Hannibal Connecting.....	3,084	.....	804	4,287	8,175
High Point-Thomas. & Denton	15,801	.....	9,958	39,865	65,624
Huntingdon & Brd. Top Mount.	28,656	.....	20,028	76,056	124,740
Illinois Northern	55,711	.....	6,103	57,165	118,979
Jay St. Connecting.....	33,544	.....	824	11,754	46,122
Johnstown & Stony Creek..	3,632	257	4,529	15,855	24,273
Kentucky & Tennessee....	21,795	3,798	14,698	15,000	55,291
Lancaster & Chester.....	13,904	.....	4,188	8,352	26,444
Laramie, North Park & West.	13,121	.....	16,971	5,000	35,092
Los Angeles Junction.....	2,963	.....	.....	4,680	7,643
Macon, Dublin & Savannah	81,984	.....	68,925	187,160	419,923[6]
Magma Arizona	5,883	.....	1,360	1,196	8,439
Manistee & Northeastern..	16,927	.....	14,974	10,285	42,186
Manufacturers	14,878	.....	.....	44,363	140,163[7]
Manufacturers' Junction ..	6,440	.....	3,335	13,331	23,106
Midland Continental	6,717	.....	19,316	16,761	42,794
Midland Terminal	54,755	.....	2,186	7,155	64,096
Minnesota Transfer	99,338	.....	.....	207,022	306,360
Morehead & North For'k ..	1,319	.....	2,903	3,745	7,967
New Orleans & Lower Coast	12,562	.....	34,234	103,534	151,227[8]
New Orleans Terminal....	179,032	.....	6,289	203,710	390,420[9]
New York & Long Branch..	5,550	.....	.....	72,874	78,424
North Louisiana & Gulf....	8,637	.....	4,287	15,388	28,312
Northeast Oklahoma	16,291	.....	18,929	66,955	121,225[10]
North. Pac. Term. of Ore.	130,503	.....	19,737	217,517	553,728[11]
Norwood & St. Lawrence..	11,634	.....	.....	20,151	31,785
Peoria & Pekin Union*....	122,000	4,723	38,000	308,000	472,723
Pitts., Allegh. & McKees Rocks	7,229	.....	1,410	4,962	13,601
Pitts., Chartiers & Yough.	166	.....	23,695	30,086	53,947
Quanah, Acme & Pacific..	69,960	.....	12,880	27,377	110,217
Rahway Valley	8,805	.....	1,965	4,616	15,386
Rock Island Southern.....	7,590	.....	3,396	9,363	20,349
Roscoe, Snyder & Pacific..	11,340	.....	.....	.....	11,340
St. Louis & Hannibal....	6,969	.....	3,366	8,089	18,424
St. Louis & O'Fallon.....	3,920	.....	.....	15,007	18,927
St. Louis & Troy.....	534	.....	274	1,145	1,953
Savannah & Atlanta.....	118,715	.....	19,892	167,983	306,590
Sioux City Terminal.....	15,027	.....	.....	7,583	22,610
Skaneateles Short Line...	4,384	.....	227	2,974	7,585
South Omaha Terminal....	40,177	.....	2,961	11,347	54,485
State Belt (Calif.).....	39,472	.....	.....	13,863	53,335
Stockton Term. & East....	1,283	.....	.....	.....	1,283
Tennessee & N. Car.	9,490	.....	3,144	2,500	15,134
Toledo Terminal	99,842	20,203	22,818	115,642	258,505
Tremont & Gulf.....	18,447	.....	52,495	103,196	174,138
Trona	20,980	.....	.....	18,369	42,682[12]
Union (Pitts.)	843,824	96,324	56,733	1,500,896	2,661,405[13]
Union Terminal Co.	10,548	4,575	3,166	26,432	44,721
Unity Railways	3,440	.....	19,126	11,212	33,778
Verde Tunnel & Smelter..	19,801	.....	12,111	33,983	65,895
Virginia & Car. Sou.....	13,375	.....	21,966	11,316	48,503[14]
Western Allegheny	12,664	.....	9,000	11,300	32,964
Winchester & Western....	4,461	.....	3,269	.....	7,730
Winston-Salem Southbnd...	47,000	.....	36,753	8,464	92,217
Wrightsville & Tennille....	12,628	.....	.....	1,711	14,339
Yosemite Valley	28,370	.....	14,420	22,980	65,770
Youngstown & Northern...	57,263	2,705	1,646	90,966	310,897[15]
ELECTRIC RAILROADS					
Denver & Intermountain...	.....	.....	4,393	7,659	12,052
Oklahoma City Junction ..	.....	.....	1,083	372	1,455
Piedmont & Northern.....	1,893	26,098	36,336	282,401	441,165[16]

$37,244,000 in 1941. Switches, frogs and crossings for railway track totalled $19,891,000, as compared to $19,484,000 in the previous year; while $55,685,000 of materials, other than rail and switches, were received for track maintenance, as compared to $52,664,000 in 1941.

Class I railroads and other operating companies received only $27,829,000 of bar and sheet steel, as compared to $50,586,000 in 1941; while the purchases included $20,205,000 of car and locomotive forgings, as compared to $20,299,000 in 1941, and $6,414,000 of boiler tubes and similar material, as compared to $7,742,000 in the previous year. Purchases of signal and interlocking materials, together with telegraph and telephone materials, last year came to $28,939,000, as compared to $28,055,000 in the previous year; while $67,599,000 appeared to have been spent for locomotive and car castings, compared to $69,777,000 in 1941.

During 1942, the railroads received about $8,737,000 of track and roadway tools, as compared to $9,287,000 in the previous year; $8,511,000 of iron and steel pipe, as compared to $10,487,000 in 1941; and $16,149,000 of hardware and small tools, as compared to $17,399,000 in the previous year. Purchases of air brake materials came to $26,807,000, as compared to $25,134,000 in the previous year; and deliveries of appliances and specialties for cars and locomotives purchased directly by the railroads amounted to $19,457,000, as compared to $20,080,000 in 1941.

Class I railroads and short lines also spent $27,108,000 for lubricating and illuminating oils, greases, etc., as compared to $22,956,000 in the previous year. Expenditures for materials of copper, brass and other nonferrous materials, amounting to $30,187,000 last year, were compared to $33,569,000 in 1941. Deliveries of electrical materials, not otherwise classified, totalled $20,604,000, as compared to $21,389,000 in 1941; while purchases for stationery and printing came to $20,733,000, as compared to $18,965,000 in 1941; and those for dining cars and lunch counters came to $39,720,000, as compared to $22,946,000 in the previous year. For chemicals, drugs and paint supplies, the railroads spent $42,427,000 last year, as compared to $39,833,000 in the previous year. They spent $8,623,000 for products of rubber and leather, as compared to $11,570,000 in 1941; while the supplies for train operation and for stations cost $17,576,000 last year, as compared to $15,721,000 in 1941. Approximately 1,600,000 bbl. of cement were purchased and 23,700,000 tons of ballast.

$307,000,000 for Maintenance of Way

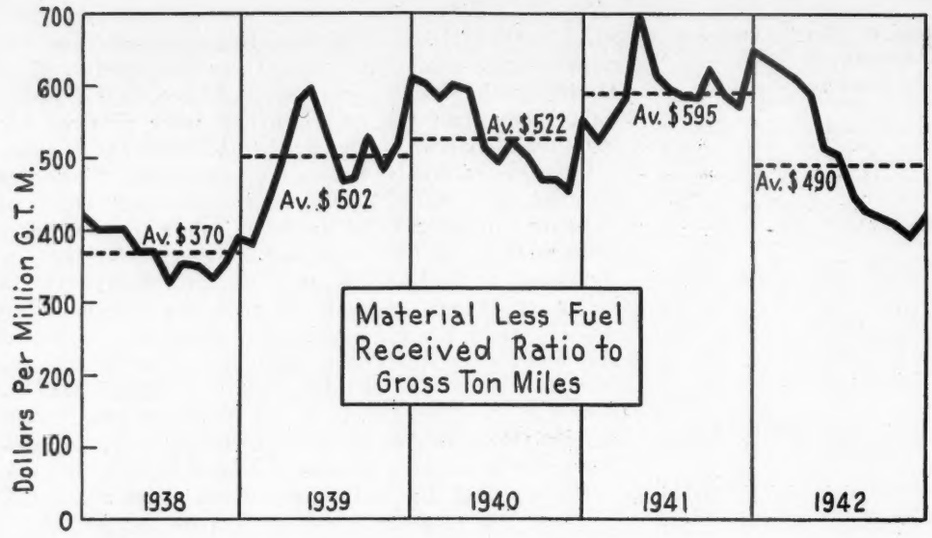
Based on special information furnished by 20 railroads, operating 30,000 miles of line, approximately $306,774,490, or 23.6 per cent, of the purchases of fuel and materials made by all the railroads in 1942 was for maintenance of way and structures; $336,406,430, or 25.9 per cent, was for the maintenance of equipment; and $411,250,892, or 31.7 per cent, of the materials and supplies (chiefly fuel for locomotives) was for conducting transportation; while the remainder, amounting to $245,274,761, or 18.8 per cent, consisted of materials used in common by all departments.

The outlay for materials and fuel purchased last year

Total includes equipment as follows: [1] $1,113 highway, $60,790 new locomotives and cars; [2] $300 highway; [3] $1,718 highway; [4] $9,700 new locomotives and cars; [5] $120,204 Diesel locomotives; [6] $2,571 highway, $79,283 new locomotives and cars; [7] $80,922 Diesel locomotives; [8] $897 used truck; [9] $1,389 highway; [10] $19,050 highway; [11] $185,971 three Diesels; [12] $3,333 highway; [13] $5,428 highway, $158,200 new locomotives and cars; [14] $1,005 highway, $841 car; [15] $158,317 two Diesels; [16] $94,437 new locomotives and cars.

* Estimated.

† None purchased where spaces left blank.



Month to Month Relation of Purchases to Traffic

was equivalent to 16.9 per cent of railway revenues, as compared to 21.8 per cent in 1941, and 23.0 per cent in 1937. Purchases of materials, less fuel, represented expenditures equivalent to an average of $495 per million gross ton-miles of freight handled in 1942, as compared to $595 per million gross ton-miles in 1941, and $522 in 1940. Materials and fuel, exclusive of equipment, purchased by the Class I trunk lines of the Eastern district, including the New England lines, totalled $488,461,000 last year, which was 39 per cent of all the fuel and materials purchased by the Class I railroads. Purchases in the Western district, amounting to $536,251,000, were 42 per cent of the total, and the Southern district accounted for $235,687,000 of fuel and materials, or about 19 per cent of the total. The Eastern lines spent 2 per cent more than in 1941; the Southern roads 10 per cent more; and the Western lines 14 per cent more. Purchases of materials and fuel by the railroads in the Western district were equivalent to 16.5 per cent of their gross operating revenues, as compared to 23.5 per cent in the previous year. The ratio was 16.5 per cent in the Southern district, as compared to 18.5 per cent in 1941; and it was 18 per cent in the Western district, as compared to 23.5 per cent in the previous year.

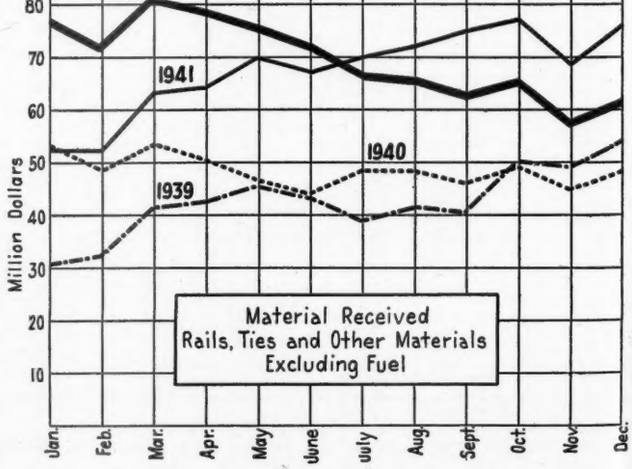
A total of $49,755,000 was spent by the New England railroads for materials and supplies, exclusive of equipment, last year; $203,716,000 by railroads in the Great Lakes region; $235,189,000 by railroads in the Central Eastern region; $54,502,000 by railroads in the Pocahontas region; $181,184,000 by Southern lines; $136,464,000 by Northwestern railways; $284,907,000 by Central Western railways; and $114,879,000 by Southwestern lines.

Less Buying on Many Roads

While the purchases by Class I railroads were slightly higher in the aggregate last year than in the previous year, 37 of 98 carriers reported smaller purchases of materials. Reductions in the year's expenditures amounted to 13 per cent on the Bessemer & Lake Erie; 18 per cent on the Central of Georgia; 13 per cent on the Chesapeake & Ohio; 28 per cent on the Chicago & Illinois Midland; 10 per cent on the Chicago & North Western; 14 per cent on the Erie; 19 per cent on the Grand Trunk Western; 20 per cent on the Lehigh & New England; 13 per cent on the Soo; 20 per cent on the New York, Susquehanna & Western; 18 per cent on the Norfolk & Western; 17 per cent on the Pennsylvania; 16 per cent on the St. Louis-San Francisco and the St. Louis Southwestern; and 13 per cent on the Western Maryland.

Recent Declines Pronounced

The repressive effect of war-time regulations on railway buying is revealed more graphically by the month-to-month totals. Aggregate purchases by the Class I railroads for materials, exclusive of fuel and equipment, declined each month following March, 1941. The total for the last 6 months of the year, amounting to $378,636,000, was a decline of 17 per cent from the corresponding expenditures in the first 6 months of 1942, and a decline of 14 per cent from the corresponding purchases in the last 6 months of 1941. Purchases in the last quarter of 1942, amounting to $184,286,000, were 19 per cent below the corresponding purchases in the first quarter of 1942, and 17 per cent below the corresponding purchases in the last quarter of 1941. Mainte-



Month to Month Trend of Purchases of Materials and Supplies, Exclusive of Fuel, Made by Railroads from January 1939 to January 1943

nance and repair materials, excluding rail and cross ties as well as fuel, totalled 17.5 per cent less in the last 6 months of 1942 than in either the first half of 1942 or the last 6 months of 1941; and expenditures for maintenance and repair materials during the last quarter of 1942, amounting to $158,802,000, were 16 per cent less than the corresponding expenditures in either the first quarter of 1942 and the last quarter of 1941.

Based on the maximum available information at this time, the Class I railroads purchased $41,980,000 of fuel and $59,665,000 of materials, exclusive of fuel, in January, 1943—a decline of 27 per cent in maintenance and repair materials from January, 1942. As many as 50 of 70 reporting railroads showed declines in their January purchases, as compared to January, 1942. The reduction was 33 per cent on the Alton; 26 per cent on the Atchison, Topeka & Santa Fe; 44 per cent on the Atlantic Coast Line; 16 per cent on the Baltimore and Ohio; 19 per cent on the Central of Georgia; 45 per cent on the Central Vermont; 37 per cent on the Chicago & Eastern Illinois; 41 per cent on the Erie; 39 per cent on the Great Northern; 29 per cent on the Louisville & Nashville; 37 per cent on the Maine Central; 32 per cent on the New York Central; 16 per cent on the New Haven; 43 per cent on the Northern Pacific; 55 per cent on the Reading; 10 per cent on the Southern Pacific; 25 per cent on the Union Pacific; and 57 per cent on the Wabash.

The month-to-month trend in the relation of purchases to gross ton-miles has also been downward—from an average of $615 per million gross ton-miles for materials, exclusive of fuel and equipment, in December, 1941 to $370 per million gross ton-miles in December, 1942, which was the lowest average outlay in relation to freight handled since 1938, which was a year of recession in railway buying. The railways have thus been receiving less material and supplies for several months while their traffic, and therefore the need for materials, has been increasing.

Details of the purchases made by the railroads in 1942 and previous years and in January of this year are given in tables and charts. Details of inventories and consumption will follow in a later issue. For further comparisons with purchases in previous years, reference is made to the *Railway Age* of March 28, 1942, and March 22, 1941.

New Book . . .

Transportation Since Time Began, by Labert St. Clair. Revised Edition. 349 pages. 8 in. by 5½ in. Bound in cloth. Published by Dodd, Mead & Company, New York. Price $2.75.

In undertaking to cover the field indicated in the title—especially since a passing glance at the future is included as well—the author has had to content himself with hitting the high spots in the development of land, water and air transportation from prehistoric times to the present. In order to give an account in the space of 63 pages of the expansion of ways and means of travel by water through the centuries—from the floating log to the luxury liner—it has been necessary to winnow the essential elements of the story from an immense mass of fact and legend. The account of the different forms of land transportation, past and present, which is almost as brief, touches upon a wide variety of vehicles, strange and familiar—ranging from sledge to jinrikisha, from chariot to victoria—as well as on the early, intermediate, and modern forms of bicycle, automobile, and railway train. The author's success in this task of selecting and highlighting material appropriate for his purpose is indicated by the appearance of this revised edition of the book.

The section devoted to transportation by air is somewhat more detailed because the relatively short period of time involved permits the use of a larger perspective. The 18-page chapter devoted to the future of transportation allows the author ample space to indulge in some far-reaching predictions of things to come, in which mechanical and political obstacles are speedily mastered in creating a co-ordinated transportation machine full of globe-girdling planes and rocket mail carriers that push the railroads into the background.

Perhaps for practical reasons, revision of this book has not resulted in bringing all portions equally up to date. Its historical material, well illustrated and well selected, remains the most useful part of the text.

Communication . . .

Praise for "Featherbed" Expose in Popular Press

MEDFORD, MASS.

TO THE EDITOR:

The very worthy article by Elisha M. Friedman in the February 21 issue of the New York Times* certainly throws some interesting and revealing light on the manpower situation.

At a time like this, with our country fighting for its very existence, what possible justification is there for such conditions to exist? Everywhere the cry is "to give and to sacrifice." Washington bureaucrats have pried into every form of business and general dictatorship is the trend of the day. A manpower board is established and we are told that every working man and woman will be affected by its rulings, whether it be re-location of working conditions or radical changes in pay is of little matter, we are told, if it contributes to the war effort. Yet such conditions as outlined by Mr. Friedman are tolerated.

Mr. McNutt was given absolute authority in the manpower program, yet who holds the iron rod of a labor union and does a bit of dictating to Mr. McNutt that he should not invade such a fertile field?

This is not a condemnation of labor unions, for there is a definite place in American industry for unionism, but most certainly there should be no room in this country for any organization or union that is permitted to maintain such a stranglehold on any industry, as exists in the railroad business today. I do not believe that the large majority of individuals employed in this industry are in accord with such rulings. It is human nature to play fair, and the average working man is willing to put in his day's work at the accepted rate of pay. Why can't he enjoy the benefits of real, honest, sober labor leadership?

Mr. Friedman's letter should be read by every thinking business man in this country, for if it can happen to the railroads it can happen elsewhere; like termites eating through a timber, it is usually too late when the damage is discovered.

The *Railway Age* would do a noble deed to print Mr. Friedman's letter in its entirety, but whom, outside of railroad circles, does the *Railway Age* reach? Such information is common knowledge to the railroad worker; what the industry needs is an intelligent and consistent presentation to the public. "Page the Association of American Railroads" or does that same man with the iron rod sit among their midst also?

C. A. WARNER

*[Mr. Friedman's article, mentioned by this correspondent, discussed the "featherbed rules" and the excessive lengths to which the "dual basis" of pay has been carried. Mr. Friedman also had an article on the same subject, but based on other and additional facts, in the New York Herald-Tribune, on the same date as the "Times" article, i.e., February 21. Mr. Warner, it seems, answers for himself the question he propounds in his last paragraph. *Railway Age* circulates beyond the railroads, but this paper has repeatedly dealt with the working rules and the excesses of the dual basis of pay—so, we believe, Mr. Friedman's articles, admirably suited to the papers in which they appeared, would add little to the information already possessed by regular readers of *Railway Age*.—EDITOR.]

Railroads-in-War News

Would Ignore Rates in War Contracts

Proposal would permit small concerns to bid for orders even with high rates

Senator Stewart, Democrat of Tennessee has introduced Senate Joint Resolution 46 which would require all government departments concerned with purchases of war materials and equipment to observe a prescribed set of freight-rate arbitraries in evaluating bids received from "small business enterprise" for supplying such materials and equipment "when they are to be transported in line-haul or road-haul services by railroad or by common or contract carriers by motor vehicle or water."

The resolution's stated purpose is "to provide a simple, effective, and uniform method of evaluating the charges for freight transportation in government bids by small business enterprise," which latter is defined as "all businesses having not more than 500 employees, and all farmers and farm cooperatives regardless of the number employed." The arbitraries are set forth in a table which is part of the resolution. They are set up in dollars and cents per 100 lb. for the commodity groups and for various distances.

"The government," said the resolution, "shall bear the actual freight charges on all shipments . . . to which the first section of this resolution applies, becoming the beneficiary in all instances where the actual freight charges are less than the freight arbitraries . . . and assuming the differences where the actual freight charges are greater than said arbitraries."

Mr. Stewart made the offering of his resolution the occasion for a Senate speech on "Discriminatory Freight Rates." In that connection he referred to the Tennessee Valley Authority and Board of Investigation and Research reports noted elsewhere in this issue. He had not seen the latter but he was sure it "will recommend a change and correction of the existing freight-rate differential." It did.

Among specific arguments in support of his resolution, Mr. Stewart had this to say: "The scandalous inequity in the distribution of war contracts in the South and elsewhere beyond the borders of favored Official Territory bears a direct relationship to freight-rate discrimination. It is not merely that the long-existing trade barriers have prevented the upbuilding of industrial facilities for the manufacture of war materials. They now make unprofitable the conversion of existing plants for war production."

American Railroaders in Persia

An A.P. dispatch from Teheran, Persia, on March 30 reported arrival there of an American-built train—having been operated to that point from a Persian gulf port 650 miles away. The train, it was reported, was operated into Teheran by American crews, carrying supplies to Soviet Russia.

There have been a number of rather vague reports in the press about American soldier railroaders and American railway equipment being on the job in Persia—but confirmatory details have up to now been hard to come by.

Supporting Senator Stewart was Senator Overton, Democrat of Louisiana, who expressed the hope "that Congress will take some action toward prescribing a policy for rate structures in continental United States." He invited the attention of the Senate to the T. V. A. and B. I. R. reports, adding: "I wish I could invite the attention of the Senate to some report made by the Interstate Commerce Commission, but, unfortunately, I cannot, and I do not know when I can look forward to the day when we shall have a full report on this important subject from the Interstate Commerce Commission."

Emergency Board for Dispute on Five Short Lines

Dr. William M. Leiserson, chairman of the National Railway Labor Panel, has appointed an emergency board to investigate disputes involving employees of five short lines—the Chicago, North Shore & Milwaukee; Columbus & Greenville; Wichita Falls & Southern; Georgia & Florida; and Meridian & Bigbee River.

Members of the emergency board are Richard F. Mitchell, chief justice of the Supreme Court of Iowa; Robert D. Calkins, dean of the School of Business, Columbia University, and Walter C. Clephane, Washington, D. C., attorney. Messrs. Mitchell and Clephane are two of five new members recently added to the Panel by appointment from President Roosevelt, the other three additions being E. R. Shaw, associate justice of the Supreme Court of Illinois; E. M. Tipton, chief justice of the Supreme Court of Mississippi, and Herbert R. Rudolph, associate justice of the Supreme Court of South Dakota. These appointments bring the total membership of the Panel to 22, nine members having been appointed originally and eight more added in February.

Need to Conserve Class A Box Cars

The supply is tight and care in handling is urged by Kendall

Because the "box car supply this year for commodities requiring class 'A' equipment promises to be extremely tight," W. C. Kendall, chairman of the Car Service Division, Association of American Railroads has called upon all railroads to take such action as may be calculated to conserve such equipment in every practicable way. The call came in a March 29 circular which set forth the situation, making specific conservation suggestions and revealing that the railroads are seeking approval of a proposal to build 15,000 such cars in the first half of 1944.

"No new box cars have been approved for construction in 1943," the circular said. "A bare minimum of 15,000 cars proposed to be built in the first half of 1944 are still unapproved. Little aid can be obtained from heavy repair bad orders, which are down to 1.2 per cent. Less than 25,000 plain box cars were added to our ownership last year, and only 10 per cent of the cars now in service are new in the past three years. The proportion of cars in first class condition is decreasing due to damage, contamination and 'wear and tear.'

"Traffic demands for high class box cars are exceptionally heavy at this time and undoubtedly will increase substantially. Grain and grain products loading is greater than during the last grain harvest, an unprecedented condition. . . . Commodity Credit Corporation is endeavoring to move over 400 million bushels of wheat before the end of June. Extraordinary amounts of grain are going into the feed and distilling programs. Ammunition and other war materials requiring high class cars will move in increasingly heavy volume. The grain movement this summer is likely to be greater than last year because of more storage room expected to be available at the markets. Grain car liners formerly employed to permit use of second grade cars will not be available this year in sufficient quantity to be of much assistance."

The circular's specific suggestions were that "positive instructions" be issued to require that no class "A" Car be furnished for loading that will so damage or contaminate it as to make it unfit for further high-class loading; that where contaminating commodities require a tight car, cars should be used to select equipment that has previously been used in such service; that care be taken to keep car doors closed to avoid wetting floors and walls; that

shippers be informed "of the critical nature of the class 'A' box car supply," and urged to avoid practices which damage such cars; and that "extreme vigilance" be exercised to detect defective equipment that might cause accidents.

Older Skilled Men Still Can Shed Uniforms for Jobs

Men over 37 now in the armed forces who have had experience in occupations designated as essential by the War Manpower Commission will not be discharged after April 1, President Roosevelt pointed out during his March 30 press conference, but they will be transferred—either on their request or that of their employers or draft boards—to inactive status in an enlisted reserve corps in order that they may return to these essential jobs. Selective service registrants who are engaged in non-deferrable occupations again were urged to shift to essential work if skilled.

Eastman Again Labels Rumors of Travel Rationing False

Rumors that the Office of Defense Transportation intended to apply priorities to civilian train and bus travel April 1 were "completely and entirely false," ODT Director Eastman declared March 30.

"It is perfectly true that passenger transportation facilities are under severe strain," he added. "For this reason I have repeatedly urged, and I urge again, that people who have no real need to travel stay off trains and buses. If they will do so, the railroads and bus lines will be able to accommodate all the essential travel, and there will be no need to apply any compulsory restrictions. I still believe we can rely on the patriotic co-operation of the American people to avert any necessity for travel control by rationing or priorities."

Barges Can't Haul Iron Ore to Southern Illinois

The establishment of a rail-water route for the movement of iron ore from northern Minnesota to southern Illinois, diverting such traffic from all-rail routes to river barges, "is inadvisable at this time," Director Joseph B. Eastman of the Office of Defense Transportation declared in a statement made public this week.

When the proposal was first made, it was favorably considered by the ODT, the statement added, because, under the conditions then prevailing, it promised to further the ODT's policy of securing "maximum conservation and utilization of all transportation facilities." The supply of open top barges then available for movement on the upper Mississippi River has since been depleted, partly through an expansion of traffic in the Ohio and lower Mississippi and partly through conversion of 116 such barges from dry cargo service to the petroleum traffic, it developed, with the result that capacity to handle the coal movement by water from northern Illinois to the Twin Cities, which amounted to 356,000 tons in 1942, might be threatened. Under 1943 conditions, said Mr. Eastman's statement, the loading of 350,000 tons of iron ore southbound "would have the effect of materially impairing the ability of the barge lines to handle coal northbound. This would make it necessary for the rail lines to move more coal northbound, with further strain on their open top equipment, manpower, and motive power." Additional loading and unloading facilities would have to be developed at both terminals of the river movement, it added, and the net effect of the diversion "would be additional use, rather than a saving in the use of rail equipment."

Order on ODT Advances to T. P. & W. Corporation

President Roosevelt has issued an executive order authorizing the Office of Defense Transportation to make advances out of earnings of the Toledo, Peoria & Western to the T. P. & W. corporation. Heretofore such advances have been made out of funds on hand when the property was taken over by the government.

The order stipulates that the advances involved are to be "for the discharge of lawful obligations of the Toledo, Peoria and Western Railroad, and for the preservation of the real and personal property, corporate organization and franchises, rights and other assets . . . but not including payment of executive salaries beyond amounts he [the Director of the Office of Defense Transportation] deems necessary for the foregoing purposes and not including payment of dividends." The advances are not to be repayable before the time of final settlement or adjudication of T. P. & W. claims for compensation for the government's use of its property.

I. C. C.-Regulated Rate Bureaus Get Anti-Trust Exemption

Immunity from prosecution under the federal government's anti-trust laws has been provided for rail, water, motor truck and freight forwarder rate bureaus, the Office of Defense Transportation announced March 27, through regulations governing the conduct of such bureaus prepared by the Interstate Commerce Commission and War Production Board Chairman Donald Nelson's certificate to the Attorney General that common carrier rate bureaus so conducted are necessary to the prosecution of the war.

Under the provisions of the so-called Small Business Concerns Act a certificate from the WPB chairman to this effect results in exemption of persons covered by it from the operations of the Department of Justice's anti-trust unit, the ODT pointed out.

The I. C. C. regulations provide, among other things, that any "carrier" meaning, for this purpose, either a common carrier or a freight forwarder, may belong to a rate conference in its appropriate territory under the provisions of the conference's by-laws and schedules of charges, which are required to be on file with the commission; that any rate conference member may propose the initiation of or a change in rates for application on the proponent's line or the lines of other members; and that each rate conference shall maintain, open to the commission's inspection, proper financial accounts and files of rate proceedings before it.

Upon rejection of a rate proposal by a rate conference, or its failure to act upon such a proposal within 90 days, a member carrier may file individual tariffs or participate in other tariffs giving effect to the proposal, and "no boycott or other means of coercion or intimidation shall be employed by a rate conference, directly or indirectly, to restrain a carrier, either a member or a non-member, from taking independent action, consistent with these rules, to establish rates other than those approved by a rate conference."

New Record in New England Coal Movement

In the week ended March 20 the railroads participating in the movement of coal into the New England states made a new high record of shipments handled, Solid Fuels Co-ordinator Harold L. Ickes announced March 29. The previous record for this movement was established in the week ended May 9, 1942.

Shipments for the week ended March 20 totaled about 432,860 tons, or 8,108 carloads, as compared with the previous record of 431,720 tons, or 8,093 carloads. The total of all-rail coal shipments to New England during the calendar year through the week ended March 20 was 79,294 cars, the announcement continued, an increase of 14,326 cars over the comparable period of 1942.

ODT Relents on Permits to Move Coal in New England

General Order ODT 15, under which Office of Defense Transportation permits would have been required after April 1 for the movement of coal by rail or truck inland from docks on the coast of the New England states, has been indefinitely suspended, the ODT announced March 31, because shippers in the affected area have taken steps to utilize available transportation facilities to the greatest advantage in the coal movement involved.

Eastern Oil Movement

Total rail movement of petroleum products into the Atlantic coast area in the week ended March 20 averaged 832,172 barrels a day, as compared with the preceding week's average of 833,878 barrels a day, Acting Petroleum Administrator Davies announced March 26. Tank car shipments averaged 807,879 barrels a day, a decrease of 6,138 from the week before, while box car shipments into New England of kerosene in drums averaged 24,293 barrels a day, an increase of 4,432 from the preceding week.

While work on the extension to the Atlantic seaboard of the 24-inch pipeline now terminating at Norris City, Ill., has been retarded by unfavorable weather, Administrator Ickes on March 30 again expressed confidence that it will be completed on schedule. In so doing, he announced that construction has passed the 200-mile mark. The total length of this pipeline will be 1,340 miles, he added, pointing out that right of way revisions have somewhat shortened the proposed route.

GENERAL NEWS

Commission Defines Forwarders' Rights

Assembly and distribution of freight part of lawful and proper function

The permissible scope of freight forwarder operations under the provisions of part IV of the Interstate Commerce Act has been further defined by Division 4 of the Interstate Commerce Commission in its findings resulting in a permit in Docket FF-148 authorizing the Republic Carloading & Distributing Company to forward commodities generally from all points in the states north of the southern border of Virginia and east of the Ohio River, on one hand, to all points in the states of California, Oregon and Washington, on the other.

The application involved the fundamental question of whether a freight forwarder properly could forward property from points beyond those at which it assembles carload shipments to points beyond those where its carload shipments are broken up, in such operations utilizing the facilities of common carrier trucks or railroads.

The division found that Congress in framing the statute had been aware that freight forwarders normally have followed such practices, and that provision for assembly rates and distribution rates was made in the act. It concluded further that to limit forwarders' operations "from the assembly points to the distribution points would disrupt the freight forwarding business as it has been conducted over a period of years, and deprive shippers located in the smaller communities of freight forwarder services."

No precedent was established in the administration of parts II and III of the act, providing for the regulation of motor carriers and water carriers, where the commission has not granted permits based upon transportation by connecting carriers, the division held because of the material differences in the nature of the businesses involved.

Because it has been the practice of the applicant, and of other freight forwarders, to offer its services to shippers not located in the cities where its carload shipments are assembled and distributed, this "general practice of long-standing in the freight forwarding industry" should be recognized as "lawful and proper," the division decided, if statutory authority for such action exists. Because of affirmative provisions of sections 408 and 413 of the act, "and in the absence of limiting provisions, we may issue permits authorizing freight forwarders to forward commodities between points beyond the assembly and break-bulk points," it said.

"Perfect Shipping"

Preparations have been made by the railroads for an active part in the Perfect Shipping Campaign which will be conducted in April. A "careful switching" folder in colors has been given every employee in train and yard service. A 16 mm. sound movie, Wartime Freight, has been completed which is designed to help new employees get the spirit of American railroading and learn how veteran workers have handled the toughest shipping problem in history.

Subjects which are being given consideration during the campaign are the training of employees, careful switching, stowing of l.c.l. freight, astray freight, better reporting of loss and damage and the handling of fragile commodities.

Club Meetings

The Car Foremen's Association of Omaha will meet on April 8 at the Chicago Great Western's freight house at Council Bluffs, Ia. The A. A. R. Committee is scheduled to present a report.

Alaska Transportation Survey

In order to determine whether a regional office of the Office of Defense Transportation is needed in Alaska, Ralph A. L. Bogan, vice-president of the Greyhound Corporation, Chicago, has been authorized by ODT Director Joseph B. Eastman to survey civilian transportation conditions in that territory.

Ickes Appoints Assistant

The appointment of Alex U. Miller as special assistant to the Deputy Solid Fuels Co-ordinator was announced March 22 by Co-ordinator Ickes. Mr. Miller, who has been on the staff of the Bureau of Mines since 1917, will deal with problems relating to the production, transportation and distribution of coal.

I.C.C. Rules on Common Carrier Status of Ambulances

Finding that the "casual and occasional" transportation of corpses and of sick or injured persons by motor vehicle over irregular routes by a person not engaged in transportation by motor vehicle as a regular business is not a common carrier activity, Division 5 of the Interstate Commerce Commission has dismissed the application (docketed as MC-67243) of the Union Funeral Association of Gillespie, Ill., for "grandfather" clause authority to engage in such business in interstate commerce.

Through-Routes Rule Interpreted by I.C.C.

Says 1940 amendment gave it authority to order better service to shipper

Interpreting the Transportation Act of 1940's through-routes provisions, the Interstate Commerce Commission has claimed authority thereunder to prescribe routes which short-haul participating railroads if it finds that better service to shippers would result. The unanimous report by Division 2, consisting of Chairman Alldredge and Commissioners Aitchison and Splawn, is in No. 28647, D. A. Stickell & Sons, Inc., vs. The Alton Railroad Company et al.; it prescribes routes, short-hauling the Pennsylvania, on grain and grain products from Chicago, St. Louis, Mo., East St. Louis, Ill., Cairo, and origins in Central Territory, via Hagerstown, Md., to destinations on the P.R.R. east of York, Pa., and Fulton Junction (Baltimore), Md., and between New York and Cape Charles, Va.

The complaint was based upon complainant's inability to obtain joint through rates, with transit at Hagerstown, to eastern destinations on the P.R.R., particularly on the Delmarva Peninsula, unless it used the P.R.R. into Hagerstown; and that involved an additional charge of 4.5 cents per 100 lb. for an out-of-line haul from Enola, Pa., to Hagerstown and return. This is because transit arrangements maintained by the P.R.R. at Hagerstown are restricted to traffic originated by it at or west of, or received from connections west of, its trunk-line western termini. Complainant did not assail the reasonableness of the out-of-line charge, but it did contend that it should not be required to pay such a charge in order that the P.R.R. might obtain the long haul.

In deciding for complainant, the commission relied on that 1940 amendment which attached to the Interstate Commerce Act's guarantee of a carrier's right to its long haul an exception proviso reading in part as follows: "Unless the commission finds that the through route proposed to be established is needed in order to provide adequate, and more efficient or more economic transportation. . . ." This was interpreted as referring to better service from the standpoint of the shipper as well as from that of participating railroads.

"Prior to the amendment . . . ," the report said, "carriers in many instances availed themselves of the right to their long haul and the disadvantaged localities and shippers had no redress. It was to

(*Continued on page 691*)

Congress Gets Third TVA Rate Report

It rounds out previous-told tale of alleged discrimination against South and West

Rounding out its story of alleged freight-rate discriminations against the South and West, the Tennessee Valley Authority has brought forth a third report entitled "Regionalized Freight Rates: Barrier to National Productiveness." President Roosevelt sent it to Congress on March 25, thus putting the TVA's thrice-told tale on Capitol Hill a week before the scheduled date for arrival there of the interterritorial rate report made by the Board of Investigation and Research created by the Transportation Act of 1940.

The previous TVA reports published in 1937 and 1939, as noted in the *Railway Age* issues of June 12, 1937, page 988, and May 6, 1938, page 788. As Chairman David E. Lilienthal's letter transmitting the present report to the President put it, the "general conclusion" of these previous reports "was that high freight rates handicap the transportation of high-grade manufactured goods in the South and inland West, or, in the converse, that the existing lower rates confer greater advantages on manufacturing in the area north of the Ohio and Potomac and east of the Mississippi—Official Territory in traffic parlance."

The present report, Mr. Lilienthal went on, "completes this line of study by appraising the effects of regional rate inequalities." It is the product of "many minds," although the text was prepared and the underlying research largely planned and coordinated by Henry B. Kline, with the collaboration of Ormond C. Corry.

Generally, the report concludes that the South and West "should contribute more abundantly to national industrial output than they have in the past," and that the way for this must be prepared by "clearing away the freight-rate handicap that hampers and delays the development of these regions." The existing rate structure is condemned as one which "interferes with free competition and equality of economic opportunity," and a general reshaping into a nation-wide structure is called for. However, "specific recommendations on the mechanics of a solution" were considered "inappropriate" because that is the "special province of the Interstate Commerce Commission," which, as the report notes, is now engaged in its Nos. 28300 and 28310 investigations of the class rate structure and Consolidated Freight Classification.

But TVA wants no more of the piecemeal-adjustment method, "the procedure favored by the railroads—generally under the label of 'treating each individual proposition on its own merits.'" It indicts such procedure of three counts, alleging that it bars consideration of traffic not already in existence, that it is "extremely uncertain," and that it "favors the great and strong over the small and weak."

Examining regional variations in rates, the report concedes that the great bulk of railroad traffic moves on commodity rates or exceptions to the classification, but it insists upon the importance of class rates because "they apply especially to the more valuable and highly fabricated kinds of manufactured goods." Index numbers derived by weighting each classification rating by the number of articles in that class, and then applying the results to the territorial first-class scale are set up with Official Territory as 100. That calculation shows the index number for Southern Territory as 137, Southwestern, 161, Western Trunk-Line, 146, and Mountain-Pacific, 171. And, the report later asserts, "it now seems clear that *regional rate differences are not justified by cost differences.*"

In its section dealing with production specializations of the regions, the report presents data which "suggest that Official Territory, like the mother country of an empire, has succeeded more than the rest of the country in using the opportunity to convert materials into higher-value goods before pouring its products into the streams of interregional trade." This does not mean, so the report says in another place, that "the present concentration of industry in Official Territory should be dissipated, or that the transportation agencies must suffer a decline in the total volume of freight. It does mean that for a more productive nation, new growth should go much more greatly than previous growth into the South and West."

It is conceded that a federal subsidy might accomplish the foregoing, but the course "unequivocally favored" by TVA is the alternative one of removing all "artificial deterrents," one of which "is the division of freight rates into five regional systems when there ought in justice, in railway economics, and in national economic policy to be one nationwide system."

Several specific examples of alleged discriminations against the South and West are then set out and charted. These "could be indefinitely multiplied," the report says, adding that "entirely apart from the ability of existing enterprises to stand up under such burdens, freight-rate handicaps do act as a slow poison in such southern and western industries as lack the sheer power to avoid having the poison administered."

The case studies, the report goes on, "do not and cannot tell the whole story. They cannot tell how much adverse freight rates had to do with the decline of enterprises now dead. Without speculative refinement, they cannot tell how much existing southern and western industries could increase their capacity, production, sales, and payrolls if the slow poison were not present. And above all, case studies cannot say how many peculiarly southern and western prospects for new industry have been stillborn because adverse rates created too cold an environment for their survival."

The day following the delivery of the report to Congress was chosen by Representative Kefauver, Democrat of Tennessee, for a lengthy House speech outlining the achievements of TVA. He covered all TVA activities, not forgetting to mention the rate report. "The existing freight rate structure had long been recognized as a barrier to development," Mr. Kefauver

(*Continued on page 692*)

Two Debt Extension Plans Pass I. C. C.

Delaware & Hudson and Midland Valley will extend maturities

The Interstate Commerce Commission on March 25 made public its approval of debt adjustment plans of two railroads—the Midland Valley and the Delaware & Hudson—under the provisions of the McLaughlin Act (the revised version of the Chandler Act), which permits a company unable to meet a bond maturity to postpone maturity dates and reduce fixed charges, subject to the agreement of a sufficient number of affected creditors, in order to avoid receivership or reorganization proceedings under Section 77 of the Bankruptcy Act. Before approving such plans, the commission is required to find, and in these cases did find, that the company is not in need of reorganization.

The Midland Valley plan was the result of that road finding itself unable to pay at maturity, April 1, 1943, a $6,715,000 issue of 5 per cent first mortgage bonds. Failure to pay these bonds at maturity would also constitute a default on two issues of 5 per cent adjustment mortgage bonds due April 1, 1953. Of the outstanding first mortgage bonds, $4,750,000 are in the hands of the public; $31,000 are held by the trustee; and $1,934,000 are owned by the railroad's wholly-owned subsidiary, the Sebastian County Coal & Mining Company. In addition, $487,000 are held in the company's treasury. Of the two series of adjustment mortgage bonds, $2,306,000 are held by the public and $125,500 by the Sebastian company, while the railroad's treasury holds $3,081,000. All of the road's common stock and 92 per cent of its preferred stock is owned by the Muskogee Company, a holding company which also controls the Kansas, Oklahoma & Gulf and the Oklahoma City-Ada-Atoka.

Under the Midland Valley adjustment plan approved by the commission, all its bonds except those in the hands of the public will be canceled; the mortgages will be closed; the maturity dates of all issues will be extended to April 1, 1963; the fixed interest rate on the first mortgage bonds will be reduced to 4 per cent; and the contingent interest on the adjustment mortgage bonds will not exceed 4 per cent, provided that such interest charges will be cumulative up to 12 per cent after all the first mortgage bonds have been retired. No dividends are to be paid on any stock so long as any first mortgage bonds are outstanding. Interest payments on the adjustment mortgage bonds are subject to the priority of payments into two funds set up under the plan: one is a sinking fund for the first mortgage bonds to be built up at the rate of $71,250 per annum, except when the net after fixed charges is less than that amount; and the other is a capital improvements funds for which not less than $100 and not more than $250 per mile of road operated must be set aside yearly.

Leaving the funded debt now outstanding

in the hands of the public undisturbed as to principal, the company's bonded indebtedness after adjustment will be about 47 per cent of its total capitalization. Fixed charges, in recent years $335,750 a year, will be reduced to $190,000 a year, or about 43 per cent, and operation of the sinking fund will effect a further reduction.

The plan of the Delaware & Hudson, approved by the commission, provides for an extension of the maturity date of its first and refunding mortgage 4 per cent bonds, and for a reduction in the amount of such bonds outstanding, but does not involve any reduction in the interest rate on the issue. $47,769,000 of these bonds are now in the hands of the public, while the Delaware & Hudson Railroad Corporation, the operating company, holds $1,000,000 of the issue and the Delaware & Hudson Company, the holding company, holds $1,231,000. The issue matures May 1, 1943, but under the plan the maturity date will be extended to May 1, 1963, on 90 per cent of the principal of the bonds in the hands of the public and on all held by the two companies. The remaining 10 per cent of the issue outstanding will be paid in cash pro rata to each bondholder.

The plan further provides for the establishment of a new sinking fund for the benefit of the extended bonds into which is to be paid each year 66⅔ per cent of the consolidated net income—after deducting net losses, if any, carried over from previous years subsequent to 1942—of the operating company, the holding company, and all subsidiaries of the holding company. However, when the amount of these bonds in the hands of the public has been reduced to $25,000,000, the annual payments into this sinking fund need not exceed $500,000 annually. In addition, certain securities estimated to have a market value of some $5,000,000 are to be sold, and half the proceeds are to be paid into this sinking fund. Included in the securities to be sold before May 1, 1948, are 304,000 shares of New York Central stock; $1,000,000 face value of Chicago, Milwaukee & St. Paul general mortgage 4¼ per cent bonds, series F; $807,000 face value of St. Louis-San Francisco consolidated mortgage 4½ per cent bonds, series A; and smaller amounts of many other railroad securities.

As long as the amount of the first and refunding mortgage bonds in the hands of the public exceeds $25,000,000 the holding company's right to declare dividends on its stock is restricted by the plan's provisions. Additional security for the bonds is provided in the requirement that all stock of the Albany & Susquehanna and Rensselaer & Saratoga owned by either of the D. & H. companies must be pledged with the trustee.

The immediate result of the plan, if sufficient assents are received to make it effective, will be a reduction of $4,766,900 in outstanding debt in public hands and a reduction in fixed charges of $191,076 per year.

Milk Truckers Can't Sell Out

Transfer of fluid-food tank trucks, trailers and tractors was prohibited by the War Production Board in its Limitation Order L-1-j, made public March 27. The primary purpose of the order, an accompanying press release indicated, was to stop the movement of contract carrier trucks normally used in moving milk in bulk from producing areas to the large cities into other services, such as transporting oil, alcohol, or chemicals.

Mid-West Board to Meet April 8

The Mid-West Shippers Advisory Board will hold its sixty-second regular meeting at Chicago on April 8. The principal speaker at the meeting will be Fred S. Keiser, associate director of the Office of Defense Transportation. Commodity committees have estimated that car requirements for the second quarter of 1943 will be 8.4 per cent higher than in the same quarter of 1942.

I. C. C. Service Order

The Interstate Commerce Commission on March 31 made public its Service Order No. 114 authorizing the Chicago, Milwaukee, St. Paul & Pacific to deliver to the Great Northern at Seattle, Everett or Bellingham, all in the state of Washington, for rail movement between Bellingham and one of the other points named all cars to or from points on the former road's line from Bellingham to Glacier, Wash., which normally would be handled on its car ferry barges now being operated by the Navy.

Milwaukee Appoints Perfect Shipping Committee

A Perfect Shipping committee which will promote the part that the Chicago, Milwaukee, St. Paul & Pacific will take in the Perfect Shipping Campaign this year has been appointed by H. A. Scandrett, president. The committee consists of W. L. Ennis, assistant to the chief operating officer, as chairman; T. W. Proctor, assistant freight traffic manager; G. W. Loderhose, freight claim agent; and F. J. Newell, assistant public relations officer.

Air-Rail Relations Indicated in Examiners' Reports

Procedures recommended in two examiners' reports to the Civil Aeronautics Board served March 30 will, if followed by the board, resolve some of the administrative questions developed from the Civil Aeronautics Act of 1938, as amended, the text of the reports indicates.

In one proposed report the relationship under the statute of the Boston & Maine and Maine Central to Northeast Airlines would be clarified. This case arose from the fact that the railroads at the time of the act's passage substantially controlled the air line's predecessor company, though through reorganization their stock interest has been diluted. While challenging the jurisdiction of the board under the circumstances, the railroads sought its finding that, since the passage of the act, they had not acquired control of the air line, and the examiners proposed that the board should so find.

Another examiners' report involved the application of Seaboard Airways—a company originally incorporated by the Seaboard Air Line in which that railroad is not interested, the report indicated, only through its possession of an option to purchase 30 per cent of the air line's stock if its application for authority to operate should be granted— to operate common carrier air service in competition with and in duplication of an existing air line. Pointing out that in this case the board for the first time is confronted with a proposal for the duplication of a major portion of the service provided by one of the larger air lines, the examiners recommended that the board deny the application on the ground that the proposed service would be contrary to the public interest.

Senate Would Publish Cost Studies of I. C. C. Staff

The Senate on March 26 adopted a resolution requesting the Interstate Commerce Commission to prepare for publication as Senate documents such of the studies of the commission's "cost-finding experts" as may now be suitable for publication.

The resolution was Senate Resolution 119 offered by Senator Stewart, Democrat of Tennessee. Presumably he had in mind the studies prepared under the direction of Dr. Ford K. Edwards, head cost analyst of the commission's Bureau of Statistics, and introduced as exhibits in the Nos. 28300 and 28310 investigations of the class rate structure and Consolidated Freight Classification.

Discussing the resolution, Mr. Stewart said that Congress directed the commission to make the studies in Senate bill 2009, which finally became the Transportation Act of 1940. That act did direct the commission to make an investigation of the interterritorial freight rate structure; although Nos. 28300 and 28310, which will perhaps satisfy the mandate in large part, had already been instituted by the commission in 1939.

February Truck-Freight Volume 12.8 Per Cent over 1942

The volume of freight transported by motor truck in February showed a decrease of 0.2 per cent under January, "due chiefly to the fact there were fewer working days," the American Trucking Associations announced on March 29. The total was 12.8 per cent above the February, 1942, total. The A.T.A. index figure, based on the 1938-40 average monthly tonnage of the reporting carriers, was 164.58, as compared to 168.1 for January.

Comparable reports were received by A.T.A. from 208 motor carriers in 42 states. They transported an aggregate of 1,371,984 tons in February, as against 1,374,282 tons in January and 1,216,457 tons in February, 1942.

Almost 90 per cent of all tonnage transported in the month was moved by carriers of general freight. The volume in this category showed a decline of 0.03 per cent under January, but held 13.5 per cent over February of last year. Transporters of petroleum products, accounting for slightly more than 5 per cent of the total tonnage reported, showed a decrease of 0.6 per cent under January, but an increase of 35.9 per cent over February, 1942. Haulers of iron and steel products reported about 1.5 per cent of the total tonnage. The volume

of these commodities increased 4.3 per cent over January, but decreased 11.6 per cent under February of last year.

Approximately 3.5 per cent of the total tonnage reported was miscellaneous commodities, including tobacco, milk, textile products, coke, bricks, building materials, cement and household goods. Tonnage in this class showed a decrease of 4.7 per cent under January, and a decrease of 13.4 per cent under February of last year.

Grain Door Prices Put Up

Ceiling prices for standard size "general manager type" grain doors were raised by an Office of Price Administration regulation March 23 on the average between 15 and 23 cents. Stating that prices previously established were resulting in a diversion of lumber to other products, threatening a shortage in the grain door supply in the face of a demand estimated at about ten million annually, the OPA set new specific ceiling limits for various types and sizes, under which sellers are permitted to adjust their individual prices proportionally. The revised prices are set forth in Amendment 138 to Supplementary Regulation 14 of the General Maximum Price Regulation.

C. & N. W. Goes to Court Against Truck Order

The Chicago & North Western, which was ordered by the Interstate Commerce Commission to cease its operations of motor vehicles by April 1, has been granted a stay by the District Court at Chicago, pending an appeal by the trustees to the United States Supreme Court. The I. C. C., in its order of November 16, 1941, had ruled that the railroad had no legal right to operate motor vehicles unless granted a certificate of convenience and necessity. The North Western has contended that its operation of trucks in the past gives it the right to continue such operation. An appeal of the commission's ruling was denied by the District Court on March 19.

I. C. C. Sharpens Definition of Water Common Carrier

A Great Lakes water carrier engaged in the transportation of bulk commodities in full cargo lots for one shipper was not a common carrier subject to the ntercoastal Shipping Act of 1933, as amended, and therefore would be entitled to exemption rom the provisions of part III of the Interstate Commerce Act under the terms of ection 303 (b) of that act, Division 4 of the Interstate Commerce Commission has uled. If, however, the carrier at times ransported bulk commodities for two or nore shippers in the same vessel at the ame time, and operated on a regular route rom port to port, it was subject to the ct of 1933, and therefore the exemption ould not apply, the division found.

Upon these findings in Docket W-773 the ivision authorized the Columbia Transportation Company to continue operation as a ommon carrier of commodities generally n the Great Lakes, pointing out that the pparent inconsistency of its conclusions hat the applicant was not a common carier under the Intercoastal Shipping Act hen transporting full cargo for one shipper but was a common carrier under part III of the Interstate Commerce Act arises from a difference between the common law definition of common carrier, as applied under the shipping statute, and the Congressional modification of that definition contained in part III of the Interstate Commerce Act.

Freight Car Loading

Loadings of revenue freight for the week ended March 27 totaled 787,360 cars, the Association of American Railroads announced on April 1. This was an increase of 19,226 cars or 2.5 per cent over the previous week, a decrease of 20,926 cars of 2.6 per cent below the corresponding week last year, and a decrease of 6,443 cars or 0.8 per cent below the comparable 1941 week.

Loading of revenue freight for the week ended Saturday, March 20, totaled 768,134 cars and the summary for that week, compiled by the Car Service Division, A.A.R., follows:

Revenue Freight Car Loadings

For the Week Ended Saturday, March 20

District	1943	1942	1941
Eastern	157,720	165,814	174,468
Allegheny	172,833	181,780	174,266
Pocahontas	56,482	54,021	54,699
Southern	122,895	127,361	120,105
Northwestern ..	72,376	88,059	85,499
Central Western	116,137	115,222	109,744
Southwestern ..	69,691	64,397	51,203
Total Western Districts	258,204	267,678	246,446
Total All Roads	768,134	796,654	769,984
Commodities			
Grain and grain products	43,140	35,568	36,913
Live stock.....	12,517	10,448	10,817
Coal	173,612	152,837	167,512
Coke	14,958	14,068	14,061
Forest products	40,154	47,479	38,886
Ore	17,312	15,963	14,226
Merchandise l.c.l.	98,829	145,077	158,661
Miscellaneous ..	367,612	375,214	328,908
March 20	768,134	797,654	769,984
March 13	769,042	799,356	759,607
March 6	748,890	770,485	742,617
February 27...	782,855	781,859	756,670
February 20...	752,449	774,420	678,523
Cumulative Total, 12 Weeks....	8,872,555	9,347,916	8,593,182

In Canada.—Carloadings for the week ended March 20 totaled 62,191 compared to 60,946 for the previous week and 64,879 for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
March 20, 1943.....	62,191	40,198
March 13, 1943.....	60,946	35,729
March 6, 1943.....	63,569	38,095
March 21, 1942.....	64,879	33,684
Cumulative Totals for Canada:		
March 20, 1943.....	707,990	425,743
March 21, 1942.....	734,926	379,769
March 22, 1941.....	642,823	340,857

No Money for Florida Canal

No appropriation for construction of the proposed Florida Barge Canal was included in the War Department Civil Functions Appropriation Bill for the fiscal year ending June 30, 1944, which was finally reported from the House committee on appropriations this week. The committee vote against the project was reported as 21 to 19; proponents had sought an appropriation of $44,000,000, as noted in the *Railway Age* of March 27, page 635, where the extensive hearings before a subcommittee were reported.

Meanwhile the bill carried funds for rivers and harbors work in accordance with estimates submitted by the Bureau of the Budget, i. e., a new appropriation of $35,700,000 for maintenance of existing works, and for new work a reappropriation of $3,200,000 available from previous appropriations. Also, there was another reappropriation of $2,000,000 for surveys with a view to building a backlog of projects for the post-war period.

$14,900,000 Asked for ODT

An appropriation of $14,900,000 for the fiscal year 1944 for the Office of Defense Transportation was called for in an estimate sent to Congress last week by President Roosevelt. The Congressional appropriation for this office for the 1943 fiscal year was $12,416,515, while $2,196,000 was provided from other sources.

Among the principal items included in the estimate were $11,320,000 for salaries, $1,500,000 for travel, and $705,300 for rents and utility services. The salary item included $2,862,900 for departmental employees and $8,457,000 for the field staff. In a letter of transmittal accompanying the estimate Acting Budget Director Wayne Coy remarked, "It is my belief that while we have already experienced critical periods of shortage in other vital components of the war program the critical period in domestic transport has not yet developed. The steps which are being taken to prevent such a shortage or to alleviate its harmful effects will be of real value to the war program."

Would Require Funds to Meet Depreciation and Deficits

Railroads would be required to maintain in liquid form funds for the replacement of depreciated property and to meet operating deficits under an amendment to the Interstate Commerce Act which has been proposed by Senator Stewart, Democrat of Tennessee. The amendment is embodied in S.931 introduced by Mr. Stewart on March 30.

It would require two separate funds. Into the one to be used "for the repair or replacement of property or equipment which has been damaged or destroyed or has become unserviceable because of use, age, or obsolescence," each road would be required to pay monthly "an amount not less than the amounts charged to depreciation for such month in accordance with rates fixed by the Interstate Commerce Commission." Monthly payments of a percentage of net earnings would be required with respect to the other fund which would be used "to pay the deficit incurring in any month in which operating expenses exceed income for such month."

The term "operating expenses" embraces "interest on and reserves for the retirement of outstanding debt," but not amounts "paid or set aside for the payment of dividends on stock." Carriers would be permitted to maintain the funds in cash or in bonds of the United States; while upon I. C. C. approval the money could be invested in other securities, including those of the carrier itself. Also, the commission

would get authority upon application to reduce amounts required to be paid into the funds, or to suspend payments. Willful failure to maintain and administer the funds in accordance with the rules would subject the responsible railroad officer to a fine of not more than $5,000 or imprisonment for not more than two years, or both.

December Bus Revenues 75 Per Cent Above December, 1941

Class I motor carriers of passengers reported December, 1942, revenues of $26,511,693 as compared with $15,149,473 in December, 1941, an increase of 75 per cent, according to the latest monthly compilation prepared by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics from 147 reports representing 152 bus operators. The increase reported in November, 1942, as compared with the same month of 1941, was 82.9 per cent. Passengers carried in December, 1942, were up 93 per cent as compared with December, 1941, or 40,291,330 as compared with 20,875,951.

Figures by regions showing bus revenue and traffic figures for the month, excluding data on charter or special party service, appear in the accompanying table.

	Passenger revenue		Passengers carried	
	December 1942	December 1941	December 1942	December 1941
New England Region	$1,238,868	$554,829	3,573,602	1,671,387
Middle Atlantic Region	2,787,586	1,411,964	6,112,806	3,228,952
Central Region	3,809,979	2,460,299	6,875,202	3,716,240
Southern Region	6,989,917	4,289,552	9,526,035	5,575,180
Northwestern Region	688,693	519,879	658,232	407,170
Mid Western Region	2,333,981	1,316,877	2,013,063	1,077,842
Southwestern Region	4,698,403	2,397,073	6,424,814	2,746,244
Rocky Mountain Region	335,351	156,490	227,817	105,909
Pacific Region	3,628,915	2,042,510	4,879,759	2,347,027

Testimony Closed in Pacific Electric Wage Case

Introduction of testimony was completed on March 27 in the hearing of the wage case at Los Angeles, Cal., involving trainmen and yardmen of the Pacific Electric Company (controlled by the Southern Pacific). The final 10 days of the hearing were devoted to presentation of testimony by the electric railway company and rebuttal by the Brotherhood of Railway Trainmen. The three members of the emergency panel, composed of Judge James H. Wolfe, chairman, Frank P. Douglass and Dr. Gordon S. Watkins, are now engaged in the preparation of their report on the case, based on a mass of testimony taken over a period of about three weeks of hearings and a total of 175 exhibits.

In presenting his case against the brotherhood demands, Frank Karr, vice-president and chief counsel of the Pacific Electric, detailed the background and organization of the present company in 1911 by merger and consolidation of a number of small transit companies in the Los Angeles and surrounding areas. This was followed by exhibits and testimony in detail on the financial development of the company, showing the losses and gains throughout the more than 30 years of the company's existence to date. Comparative statistics also were detailed concerning competitive transit companies operating in the same area of Southern California as the Pacific Electric.

In presenting the financial history of the company, attorney Karr brought out detailed testimony to show the changes in methods of operation and abandonment of lines in recent years, as a rehabilitation program to effect economies was worked out. Brief testimony also was introduced telling of the recent inauguration of special service to Terminal Island at Los Angeles harbor to handle shipyard workers, this service having been developed on behalf of the United States Maritime Commission.

In concluding its case, the company presented a complete geographical and operational breakdown of the system at the present time, detailing the rail and motor coach lines, number of passengers handled, fluctuation in employment and other details. At one point it was brought out that 2,600 men now are employed in train service by the company.

Split I. C. C. Decision Allows More Truck Competition

As the result of an Interstate Commerce Commission decision to which five members of the commission expressed dissent, authority has been granted Standard Freight Lines, a common carrier motor truck operator providing service over regular routes from Chicago to Detroit, Mich., St. Louis, Mo., and La Crosse, Wis., to lease the operating rights of Certified Motor Transport, providing common carrier truck service between Minneapolis, Minn. and La Cosse in order to form a through-trailer route through Chicago to Minneapolis by which this operator can handle freight between the Twin Cities and points east and south of Chicago, served by it and Bates Motor Transport Lines, an associated company, without interchange at Chicago.

Such authority was granted the applicant by the commission's Division 4, but the proceeding was reopened on petition of the Illinois-Minnesota Motor Carriers Conference for consideration by the full commission. The protestants contended that adequate service already existed between Chicago and Minneapolis, and that the loss of traffic and revenue they would suffer as a result of the establishment of this service would impair their ability to continue their present service.

The commission majority, with Commissioner Eastman participating, found that the revenues of protesting cariers would not be so seriously affected by the added competition as to impair their ability to provide service, in view of the traffic potentialities of the territory and the increased demand for transportation facilities resulting from the war effort.

Commissioners Lee and Splawn, in separate dissenting expressions, considered the public interest adversely affected by the creation of a new through operation by a transfer of local operating rights where adequate competitive service already is available. Chairman Alldredge joined in Commissioner Lee's opinion, and Commissioner Rogers also dissented.

In still another dissenting opinion, Commissioner Miller elaborated upon two reasons for his disagreement with the majority view; namely, that under present "abnormal" traffic conditions the commission should be guarding against "a new era of bankruptcies" after the war emergency ends, and that carriers already in the field should be accorded the right to transport all the traffic they can handle without being faced with a new competition.

February Locomotive Shipments

February shipments of railroad locomotives totaled 219 as compared with 159 in January and 100 in February, 1942, according to the Bureau of the Census' monthly compilation of reports from builders. The February, 1943, total included 155 steam, three electrics, and 61 Diesel-electrics.

Unfilled orders at the end of February totaled 1,973 locomotives, including 1,22[illegible] steam, 40 electrics, 707 Diesel-electrics and five of other types. As of the end of January the builders had unfilled orders for 2,043 locomotives, while the total as of February 28, 1942, was 1,273.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops show that 18 locomotives (15 steam and three electrics) were thus produced in February, as compared with 17 (all steam) in January, and five (all steam) in February, 1942. As of February 28, railroad shops had unfilled orders for 92 locomotives, including 82 steam and 10 electrics. Unfilled shop orders at the end of January totaled 109 locomotives, while the total as of February 28, 1942, was 34.

"Training Within Industry" on the Central Vermont

The Central Vermont has joined in the War Manpower Commission's "training-within-industry" program—General Manager H. A. Carson having announced that the federal government's plan for training supervisors and other "key men" of the company's various departments will be in full swing on the road during April.

Preliminary classes for department heads have already been held at St. Albans under the direction of George Bork, federal trainer, and seven classes of 12 employees each went into training on March 29. As the basic courses will be of ten hours' duration, it is expected they will extend through April and the first week of May.

The courses have been found beneficial for inculcating effective methods of training new employees in their jobs, and the C. V. recognizes the need of efficient "trainers" among its own supervisory staff—men who can show new employees how to become productive in the shortest pos-

sible time. The outstanding graduates of the Central Vermont program will be certified as training instructors, and will be authorized by the government to keep the plan alive on the railway and pass it along to others in the industry.

Through-Routes Rule Interpreted by I.C.C.

(*Continued from page 686*)

remedy that situation, apparently, that the exception was added. The commission was thereby given authority when it finds that through routes are 'needed in order to provide adequate and more efficient or adequate and more economic transportation' to require the establishment of such routes although they may short-haul one or more of the participating carriers. We interpret that exception to mean adequate and more efficient and more economic from the public or shippers' as well as the participating carriers' standpoint. That such was the intent of Congress is evident from the conditions the amendment was apparently designed to correct, from the fact that in the added proviso even the preference to be accorded the originating carrier is made subservient to the public interest, from both limitations on the right of a carrier to retain its long haul, and from the fact that Congress specifically provided that as between carriers 'No through route or joint rate applicable thereto shall be established by the commission for the purpose of assisting any carrier that would participate therein to meet its financial needs.'"

Although it was eliminated from the complaint after having been named originally as a defendant along with the P.R.R., the Baltimore & Ohio nevertheless participated in the proceeding. With a transit, rate, and restricted routing situation like that complained of, it feared that granting of the relief sought would establish a precedent. In the latter connection, both the P.R.R. and the B. & O. contended "that a 'logical and equal extension of the principle' here involved would result in wasteful cross-hauling, 'seriously affect the entire structure of rates on grain and grain products subject to transit in trunk-line territory,' and materially reduce their revenues received from out-of-line hauls."

The commission found it unnecessary to determine whether these apprehensions were well-founded. "It will suffice to say that even if they were, that would be no reason for denying complainant just and reasonable through routes at the established joint rates," the report added.

Expansion of Trans-Canada Air Lines Contemplated

A report issued by H. J. Symington, K.C., president of Trans-Canada Air Lines, which is closely allied with the Canadian National Railways, indicates that plans for trans-oceanic flying are under consideration and that the company plans a shorter route for its Canadian transcontinental line to points in western Canada and the Yukon.

The report said that operating revenues of the company in 1942 amounted to $7,337,319, an increase of 26 per cent over 1941, indicating the continued growth of the company's earning power. 104,446 passengers were carried and passenger revenues totaled $3,065,453, an increase of 23 per cent over 1941. Air express revenues were $173,020—this traffic having doubled that in 1941. Operating expenses were $6,628,399, an increase of 25 per cent over the preceding year and, after meeting income charges and interest, the company had a surplus of $494,915 for the year.

Trans-Canada operated over 4,857 route-miles between the Atlantic and Pacific seaboards during the year, an increase of 833 miles as compared with 1941.

R. C. White, Mo. Pac., Praises Engineers

Addressing the Engineers' Club of St. Louis, Mo., on March 6, R. C. White, chief operating officer of the Missouri Pacific, and for many years in the engineering and maintenance of way departments of that road, paid tribute to the railroads for the way in which they have met the challenge of the all-time peak war transportation demands. He acknowledged also the important contribution that has been made by shippers and by the Office of Transportation in this regard, but singled out for special recognition, the railroad engineer, saying, "I am proud of the fact that engineering skill, engineering brains and engineering patience and perseverance have been factors in making all of this possible."

Speaking of the manner in which the railroads rallied to the needs of the country following Pearl Harbor, Mr. White said that following that attack, "the railroads literally dedicated every thought, energy and purpose to the nation's war effort. They did not know what the demands might be. No one in authority knew and consequently no one could tell them, but they faced the future with confidence because of a patriotic desire to serve to the utmost, and an inherent sense of their generally little-recognized and appreciated strength. They had both the will and capacity to do."

That they have met the challenge, Mr. White made clear by comparing their records of performance in 1942 with corresponding records during 1918, and pointing out that this improvement was accomplished with fewer cars and locomotives. "I think you will agree," he said, "that all this adds up to a marvelous record—a record that reflects in every way the true spirit of the American railroads, and, in fact, the true spirit of America—progress, efficiency, service."

Turning to the specific contribution made by engineers "to help make the railroads more efficient and to enable them to serve the nation better," Mr. White cited the development of centralized traffic control; the reduction in rail and mechanical failures through the use of electro-magnetic detectors; the equipping of locomotives with roller bearings, light alloy reciprocating parts and superheated steam; the development of the Diesel locomotive itself; and the adaptation of the telephone, the radio, teletype and photography as factors in increasing the over-all speed of cars in their route from point of origin to point of destination.

In closing, he said, "In meeting post-war conditions, we as engineers must develop vision and imagination as never before—must think in world terms, with a realization that our future world will be closely welded together—by transportation."

I. C. C. Changes Mind on Status of Water-Transport Services

Modifying its previous findings as to the status of a company employing the vessels of others to provide a transportation service by water, the Interstate Commerce Commission, Division 4, is now of the opinion that a "person is using a vessel as a water carrier if that person deals with the public and provides the transportation by vessel as a principal, rather than as agent, and has control of the use of the full reach of the vessel by at least the charter of all its cargo carrying capacity in transportation between ports designated by that person."

The report came on reconsideration of W-473, which embraces also W-434. Applicants are J. C. Strittmatter, doing business as the Consolidated Steamship Companies, and the Olympic Steamship Company, their joint operation being conducted under the name of Consolidated-Olympic Line. The latter provides transportation services between California and Oregon-Washington points by utilizing available space on vessels of others, particularly transporters of lumber.

The Division's prior report, as noted in the *Railway Age* of May 30, 1942, page 1094, applied the rule of the Motor-Carrier-Act case involving the status of Acme Fast Freight, Inc., holding that applicants' plan of utilizing services of independent water carriers did not "in and of itself, make the operations of those carriers the operations of applicant." The present report finds, however, that while there are "certain similarities" there are at the same time "many dissimilarities" between the operations of Acme and those of Consolidated-Olympic. Nor does the commission seem to think there can be a precise application of the Dixie Ohio case rule which stipulates that persons seeking carrier status on the basis of highway transportation services performed with the vehicles of others must show that such vehicles are operated under their direction and control and their responsibility to the general public as well as to the shipper.

In breaking away from these Motor-Carrier-Act precedents, the commission mentioned "differences in language" as between the comparable provisions of Parts II and III of the Interstate Commerce Act, the latter being "broader," justifying a determination that the requirement for water-carrier status is "use of the vessel irrespective of ownership." Neither is "control of the operation and navigation of the vessel" required, since it has become customary "that vessels remain in charge of their officers and crews."

Thus did the commission evolve the rule noted at the outset. And, accordingly, it vacated the previous denial order, and proceeded to grant Consolidated-Olympic certificates covering such of its operations as

met the requirement, i.e., operations where full cargo spaces of vessels were utilized under per diem charters.

On that basis, the applicant gets a "grandfather-clause" certificate covering northbound operations conducted on and since January 1, 1940, from San Francisco, Calif., and from Los Angeles harbor and contiguous harbors to Seattle, Wash., and Tacoma. It gets certificates on a showing of public convenience and necessity, authorizing continuance of northbound operations from the same California points to ports and points on Coos Bay, the Willamette and Columbia rivers below Portland, Ore., Grays Harbor, and Puget Sound. The application was denied insofar as it sought certificates covering southbound services which Consolidated-Olympic provides by means of space charters of less than the full capacity of the vessels.

Representation of Employees

As a result of an election under National Mediation Board supervision, called to settle a dispute between the Order of Railway Conductors and the Brotherhood of Railroad Trainmen over authority to represent road conductors of the St. Louis Southwestern and the St. Louis Southwestern of Texas, the last named union was designated in place of the former by a vote of 119 to 88.

On the same railroads yardmasters, who had previously been represented by the Yardmasters' Associations of the respective roads, voted 24 to 3 for representation by the Brotherhood of Railroad Trainmen. The National Council of Railway Patrolmen's Unions, A. F. of L., was chosen to represent patrolmen in the police department of the Detroit & Toledo Shore Line and the Detroit Terminal, not previously represented by any organization. An election on the Alton & Southern, called to settle a dispute as to representation of the same class of employees on that road, resulted in no certification, as no organization received a majority of the votes cast.

After certain employees had been excluded from participation because the majority of their time was spent at other duties, an election resulted in the red cap porters of the Dayton Union designating the United Transport Service Employees of America, C.I.O., as their representative by a vote of 8 to 1.

Mechanical department foremen or supervisors of mechanics of the Chicago & Western Indiana and the Belt Railway of Chicago, not previously represented by any organization, designated the American Railway Supervisors' Association as their representative.

As the result of a dispute involving representation of yardmasters of the Erie, the National Mediation Board was called upon to determine the eligibility of certain employees to vote in an election ordered to decide between the Order of Railway Conductors, which had represented this class of employees of the Erie, and the Brotherhood of Railroad Trainmen. Eight extra relief yardmasters and one employee working as a yardmaster were involved in the eligibility dispute. Briefs were filed by the contesting unions, and the board decided that since the eight part-time yardmasters worked a major portion of their time during a representative period and the other employee was regularly assigned to yardmaster's duties, "the absence of a seniority date or agreement coverage cannot be accepted as depriving these employees of voting with the craft or class in which they work." The election was won by the Brotherhood of Railroad Trainmen, 49 to 46.

Congress Gets Third TVA Rate Report

(Continued from page 687)

said, adding that "never until the TVA was organized had the case been adequately presented to the public." To try to bring about "an adjustment of freight rates that discriminate against us," he went on, "should be one of the foremost matters for the attention of members from the South and the West."

Representative Sparkman, Democrat of Alabama, broke in to recall that the present TVA report was the third in a study initiated by Interstate Commerce Commission Chairman J. Haden Alldredge, who was formerly head of TVA's Commerce Department. "I think undoubtedly," said Mr. Sparkman, "it was the monumental work he did in that first report that brought him so prominently to the attention of the nation as a whole and showed him to be so well fitted for the position he now holds on the Interstate Commerce Commission. All three reports have been splendid, but . . . the first report was the one that pointed up the problem and got this nation to seeing just how badly handicapped some areas of our country were as against other areas by these regionalized freight rates."

In a statement inserted in the appendix to the March 26 issue of the Congressional Record, Representative Whitten, Democrat of Mississippi, called the TVA report "another great credit to that organization." He went on to say that "if the holier than thous, if the C. I. O. and other labor organizations and the wives of Presidents will exercise themselves as much about discrimination against the South as they have about claimed discriminations in the South, our economic situation in the southland will so improve as to relieve any necessity for alarm on their part." Mr. Whitten was evidently unaware of the fact that Mrs. Roosevelt has made at least one pronouncement with respect to the freight-rate situation in the South. It was reported in the *Railway Age* of September 10, 1938, page 386.

See Second-Quarter Loadings Up 2.5 Per Cent

Freight carloadings in the second quarter of 1943 are expected to be 2.5 per cent above actual loadings in the same quarter of 1942, according to estimates compiled by the 13 Shippers' Advisory Boards. On the basis of those estimates, loadings of the 28 principal commodities will be 9,170,439 cars in the second quarter of 1943 compared with 8,947,071 for the same commodities in the corresponding period in 1942. Of the 13 Boards, eight estimate an increase and five a decrease in carloadings in the second quarter of 1943 compared with the same period in 1942.

The Tabulation below shows actual loadings for each district in the second quarter of 1942, the estimated loadings for the second quarter of 1943, and the percentage of increase or decrease.

Shippers' Advisory Boards	Actual Loadings Second Quarter 1942	Estimated Loadings Second Quarter 1943	Per Cent Increase
New England	190,464	188,070	1.3d
Atlantic States	812,561	822,807	1.3
Allegheny	1,196,565	1,170,166	2.2d
Ohio Valley	1,229,014	1,245,881	1.4
Southeast	1,010,972	1,038,362	2.7
Great Lakes	773,318	798,961	3.3
Central Western	239,384	269,664	12.6
Mid-West	1,105,410	1,205,630	9.1
Northwest	720,912	772,623	7.2
Trans-Missouri-Kansas	379,075	373,976	1.4d
Southwest	596,288	615,687	3.3
Pacific Coast	412,452	411,929	0.1d
Pacific Northwest	280,656	256,683	8.6d
Total	8,947,071	9,170,439	2.5

The Boards expect an increase in the second quarter compared with the same period one year ago, in the loading of 13 commodities but decreases in 15 commodities. Among the commodities expected to show the greatest increases are the following: Grain, 22.9 per cent; fertilizers of all kinds, 13.4 per cent; hay, straw and alfalfa, 13.2 per cent; manufactures and miscellaneous, 10.4 per cent; livestock, 8.2 per cent; coal and coke, 5.2 per cent; ore which includes iron and other ores not specified, 4.8 per cent; machinery and boilers, 4.6 per cent, and petroleum and petroleum products, 3.2 per cent.

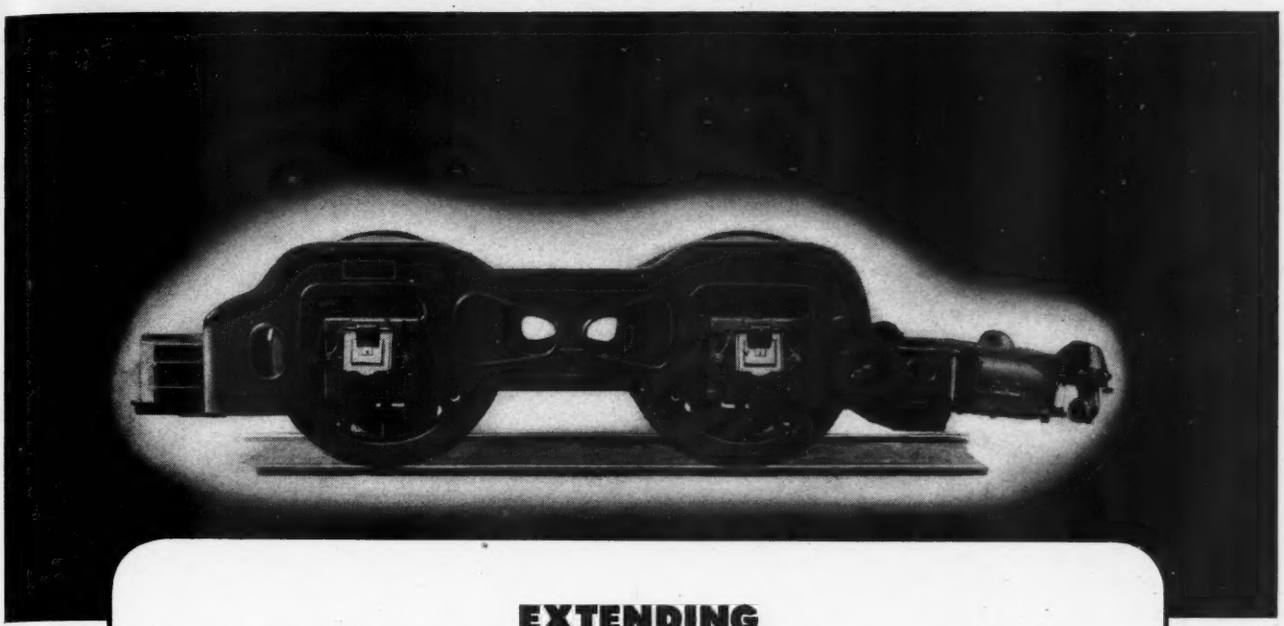
Among those expected to show the greatest decreases are the following: Agricultural implements and vehicles other than automobiles, 35.6 per cent; cement, 20.9 per cent; citrus fruits, 15.1 per cent; paper, paperboard and prepared roofing, 12.5 per cent; cottonseed and products except oil, 9.1 per cent; sugar, syrup and molasses, 8.9 per cent; all canned goods, 8.4 per cent; lime and plaster, 7.9 per cent; brick and clay products, 7.4 per cent; gravel, sand and stone, 6 per cent; and iron and steel, 5.7 per cent.

Traffic Through Pacific Coast One Third of All Ports

The volume of export freight handled through Pacific Coast ports is about one-third of the total movement through all American ports, according to M. J. Gormley, executive assistant of the Association of American Railroads in an address before the seventeenth annual meeting of the Pacific Northwest Advisory Board at Portland, Ore., on March 25. Officers elected for the ensuing year are: President, Gordon Tongue, secretary-treasurer of Superior Portland Cement, Inc., Seattle, Wash.; vice-president, H. D. Smith, Western zone traffic manager of the Weyerhaeuser Timber Company, Tacoma, Wash.; executive secretary, H. E. Kerry, general traffic manager of Rayonier, Inc., Seattle; and secretary, F. T. Westmeyer, district manager of the Association of American Railroads, Seattle.

In 1942, Mr. Gormley declared, the railroads in the Western district handled 75

News Department continued on next left-hand page



EXTENDING

a helping hand

TO OVERWORKED LOCOMOTIVES

Locomotives were never worked harder than today. And because they must be kept working *still harder* and *longer* they need all the help they can get to carry the tremendous loads imposed upon them.

The several thousand Boosters now in service are helping locomotives move more tons . . . more miles . . . faster. Besides supplying the required additional power for starting heavier loads, the Locomotive Booster* speeds up train movement all along the line by providing a supplementary power to meet operating emergencies.

*Trade Mark Registered U. S. Patent Office

FRANKLIN RAILWAY SUPPLY COMPANY, INC. NEW YORK CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

per cent more freight traffic and 27 per cent more passenger business than in 1918, the peak traffic year of the first World War. One of the reasons the Western carriers are playing a greater part this time, Mr. Gormley explained, is that this is a global war and America must face both ways.

"Military traffic must move in large volume westward as well as eastward," he said. "A defensive fighting force must be maintained on both coasts, and men and their equipment, together with supplies for our allies, must be shipped from ports on the Pacific as well as on the Atlantic. In the last war, the movement of export freight to Pacific Coast ports was negligible. Today, the volume of export freight handled through these ports is about one-third of the total movement through all American ports."

Pointing out that another reason the western railroads' job is so much bigger now is that a large number of army camps, air fields and war production industries are located in the West, Mr. Gormley continued: "In the war 25 years ago, very few army camps were situated in this territory, and there was little need for plants to manufacture planes, as the airplane had not become the weapon of war it is today. Shipbuilding on the Pacific Coast was not carried on to the extent it is at the present time; consequently, the transportation westward of materials that go into the construction of vessels was not nearly so heavy.

"For example, Portland has one of the large and important shipyards of the country. This plant is making an enviable record and a vital contribution to the war effort. But I wonder how many people realize how dependent this plant, as well as similar ones at Seattle and Tacoma, is on rail transportation and how much work the railroads have to do in order to keep it going at top speed.

"The Kaiser shipyard at Portland needs a vast quantity of steel, and most of this must be obtained from Chicago, Youngstown and Pittsburgh, a distance of hundreds of miles. The steel must come by rail, and this has added to the load of the Western carriers."

Mr. Gormley stated that the tremendous job being done by the nation's railroads so satisfactorily is due to long years of planning and preparation and to co-operation between and among railroads, between the railroads and the shippers and receivers of freight, and between the railroads and the government. "All are working together to insure adequate and efficient transportation for the war effort," he said.

The transportation outlook for the coming months, Mr. Gormley declared, is that traffic will continue to increase. According to preliminary estimates made for January of this year, he related, ton-miles during that month were 28 per cent more than they were in the corresponding period of 1942 and passenger-miles were 90 per cent more.

"To help meet the rising tide of traffic," Mr. Gormley went on, "the railroads will need more new equipment. They will need it because they have very little unused carrying capacity left. Moreover, they have about reached the limit in making serviceable freight cars and locomotives out of unserviceable ones through repair. The percentage of so-called bad-order freight cars awaiting repair is now down to 2.6 per cent, which is less than half of what before the war we considered a practical minimum to which this percentage could be held. The percentage of locomotives awaiting repair is now 4.9 per cent, or about half of what we at one time thought to be a practical minimum."

Mr. Gormley expressed the hope that the War Production Board will find it possible to allocate materials for the 80,000 new freight cars and the 900 new locomotives which the railroads are trying to obtain before the 1943 peak of traffic.

"But even if these freight cars and locomotives are authorized, built and placed in active service before next October," Mr. Gormley said, "it will be necessary to improve still further the utilization of equipment. In 1942, each serviceable freight car and each serviceable locomotive performed more transportation service than ever before. The average freight car did three-fifths more work a day than it did in 1939, and the average locomotive about one-third more than in 1939. But this record will have to bettered this year if the railroads are to do what will be expected of them."

An increase in railroad efficiency of at least five per cent was urged by Mr. Gormley, who believes this can be accomplished if the shippers and receivers of freight and the railroads do their full part.

Wood-Preservers' Association

The one-day "war-time" annual meeting, which will be held at the Palmer House, Chicago, on April 27, will be confined to the receipt of reports of committees and essential items of general business, including the installation of new officers. A proposal will also be submitted to change the annual meeting from January to April and to change the fiscal year to commence on April 1 instead of on January 1 as heretofore.

Reports will be presented by committees on Preservatives; Co-ordination and Standardization of Treatment Specifications; Pressure Treatment of Oak Ties and Lumber; Douglas Fir—Pressure Treatment; Pressure Treatment of Southern Pine Ties and Lumber; Pressure Treatment of Southern Pine Piles; Pressure Treatment of Poles; Non-Pressure Treatment of Poles; Inspection; Painting of Creosoted Wood; Tie Service Records; Bridge and Structural Timber; Service Bureau Board; Marine Piling Service Records; Pole Service Records; International Termite Exposure Test; Post Service Records; Diversified Uses of Treated Wood; Uses of Treated Wood for Car Lumber; and Fireproofing.

A RECORD-BREAKING TOTAL of 1,437 freight cars loaded with finished war products rolled out of the East Pittsburgh, Pa., works of the Westinghouse Electric & Manufacturing Co. in February. In August, 1942, the plant's outgoing carloadings totaled 1,295, a new monthly record at that time, but since then the mark has been exceeded repeatedly.

Construction

CENTRAL OF GEORGIA.—This road has awarded a contract to the Ross & White Company, Chicago, for the installation of a Red Devil locomotive coaler at Cedartown, Ga.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Division 4 of the Interstate Commerce Commission has authorized this road to construct a 7-mile line from a point about 3 miles from Granger, Iowa, to a connection with its main line about 1 mile east of Woodward. This work will permit abandonment of the existing line from near Granger to a point near Madrid and so relieve the road of the expense of rebuilding a bridge crossing the Des Moines River. No river crossing is involved in the new line, the net cost of which is estimated at $252,976, to be provided from current funds. The track will be laid with used 90 lb. rail now on hand.

CHICAGO, ROCK ISLAND & PACIFIC.—A contract has been awarded the List & Weatherly Construction Co., Kansas City, Mo., for the construction of two concrete abutments on steel bearing piles, the remodeling of the top of pier No. 4, and the erection of a 50-ft. and a 80-ft. deck plate girder spans with a ballasted deck at bridge No. 8605 near Lesbia, N. M.

DELAWARE, LACKAWANNA & WESTERN.—This road has awarded a contract to the Ross & White Company, Chicago, for the installation of a Red Devil locomotive coaler at Hoboken, N. J.

ELGIN, JOLIET & EASTERN.—This road is constructing a siding and extending another siding at Hobart, Ind., at an estimated cost of $48,000. The work is being done by company forces.

ILLINOIS CENTRAL.—This road has awarded contracts to the Ross & White Company, Chicago, for the installation of Red Devil locomotive coalers at Indianapolis, Ind., and Cairo, Ill., and an N-and-W type cinder plant at St. Louis, Mo.

LEHIGH VALLEY.—This road has awarded a contract to the Ross & White Company, Chicago, for the installation of Red Devil locomotive coalers at Lehighton, Pa., and Sayre.

MISSOURI & ARKANSAS.—This road has awarded a contract to the Ross & White Company, Chicago, for the installation of a Red Devil locomotive coaler at Harrison, Ark.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—To replace a segment of this road's main line in the path of a reservoir, the Tennessee Valley Authority will construct for it a 10.73-mile line between Camden, Tenn., and Denver, including a bridge across the Tennessee River.

MEMPHIS UNION STATION COMPANY.—This organization has launched an improvement program for the Memphis (Tenn.), Union Station at an estimated cost of approximately $100,000. The work will include the installation of a drop pit

for handling Diesel engines, construction of a brick and concrete building for use as an electric workshop and oil storage house, the rearranging of coach storage yards, the installation of additional ticket office facilities and an additional checkroom in the passenger station, and the steam-cleaning and repainting of the entire station.

THE PENNSYLVANIA now has 414 women employees cleaning and polishing passenger coaches, diners and mail and baggage cars in its Sunnyside yards in Long Island City, N. Y. While most of these women are new employees, four of them have been doing this sort of work ever since World War I and have been with the road for approximately a quarter of a century. The total number of such employees is 708.

Supply Trade

E. G. Budd Reports Largest Sales in Company's History

Sales amounting to $115,289,828, the largest in the company's history, were reported for 1942 by the Edward G. Budd Manufacturing Company, as compared with $84,216,701 in 1941. Consolidated net income was $3,802,030 after all charges, including provision for federal and other taxes, depreciation, interest and a reserve of $1,420,000 for reconversion to peacetime activities when the war is over. The earnings reported are subject to renegotiation with the Price Adjustment Board of the United States Navy. Charges for income and excess profits taxes totaled $14,855,000, more than twice the amount in the preceding year.

E. C. Bullard, vice-president and general manager of the **Bullard Company,** Bridgeport, Conn., was guest of the Bullard foremen's club on March 18 at a dinner attended by 200 members and friends to celebrate his 25th year with the company.

The American Car & Foundry Co.'s shipyard, engaged in building mine sweepers, salvage boats, tank lighters and net tenders, has received a second renewal of its Army-Navy production award, giving it the right to add a second star to its "E" banner.

Roy B. Rose, an executive of the **H. K. Porter Company, Inc.,** Pittsburgh, Pa., has been appointed manager of a new district office for eastern Pennsylvania, western New Jersey, Maryland and Delaware, opened in the Girard Trust Building, Philadelphia, Pa.

The Army-Navy "E" award for high achievement in war production was presented to both the Allenport, Pa., and Monessen plants of the **Pittsburgh Steel Company** in separate ceremonies on March 18. Officers of the Army and Navy, officials of the company, and thousands of employees participated in the ceremonies.

Charles R. Cox, executive vice-president of the **National Tube Company,** has been elected president of this company and the **Tubular Alloy Steel Corporation,** two subsidiaries of the United States Steel Corporation, to succeed **Benjamin F. Harris,** who has resigned and is now a consultant to the president of the corporation in connection with war activities.

Harry J. Billica, formerly senior industrial specialist in the War Production Board's office of war utilities, has joined the sales organization of the **Copperweld Steel Company.** Before his association with the WPB, Mr. Billica was sales engineer for the Indiana Steel & Wire Co., and prior thereto he was associated with the Graybar Electric Company as Pacific district line material manager.

Robert H. Morse, Jr., whose promotion to general sales manager of **Fairbanks, Morse & Co.,** Chicago, was reported in the *Railway Age* of March 27, entered Fairbanks-Morse service in 1916. He enlisted in the U. S. Army in 1917, saw considerable service in France and after the conclusion of the First World War, returned to Fairbanks-Morse, where

Robert H. Morse

he spent 10 years in the manufacturing divisions of the company. He then served as manager successively of the branch sales offices at Cincinnati, Ohio, Dallas, Tex., and Boston, Mass., and as manager of sales for the Stoker division. In August, 1942, he was promoted to assistant sales manager at Chicago, which position he held until his recent promotion, effective March 25.

Sidney R. Snow, general superintendent of the Waukeegan, Ill., works of the **American Steel & Wire Co.,** a subsidiary of the United States Steel Corporation, has been appointed assistant to the vice-president in charge of operations. **John R. Gaut,** assistant general superintendent at the Waukeegan works, has been advanced to general superintendent to succeed Mr. Snow.

Harry F. Potter, who has been associated with the **Crane Company** for 43 years in the finance, credit, operating and sales departments and has been manager of branch houses since 1931, has been elected secretary of the company. **James A. Dwyer,** district manager with headquarters at New York, will succeed Mr. Potter as manager of branch houses. **David J. Molloy,** assistant manager of the New York branch, will succeed Mr. Dwyer as district manager, and **George P. Gregory, Jr.,** has been appointed assistant manager.

OBITUARY

Max W. Babb, chairman of the board of the Allis-Chalmers Manufacturing Company since January, 1942, and president of the company for 10 years prior thereto, died on March 13 in Milwaukee, Wis. He was 68 years of age.

Norton J. Bond, a member of the advertising department of the Electric Storage Battery Company, Philadelphia, Pa., for 23 years, died on March 15. He was 55 years of age. Before joining the company, Mr. Bond worked in various Philadelphia advertising agencies, and for the Curtis Publishing Company.

Charles William Werst, chief inspector of the Baldwin Locomotive Works, died at the age of 75 years, in West Palm Beach, Fla. Mr. Werst entered the employ of the Baldwin Locomotive Works in 1898. He served as foreman and superintendent of a number of shops until 1910, when he left to become general superintendent of the Lima Locomotive Works, returning to Baldwin in 1915. In World War I he headed a group of engineers and mechanics who went to Russia to assemble Baldwin locomotives.

Donald C. Barrick, co-founder of the Union Metal Manufacturing Company, Canton, Ohio, and more recently co-ordinator of machine tool production, died on March 9 at the Lakeside hospital, Cleveland, Ohio, at the age of 59. Mr. Barrick

Donald C. Barrick

attended Ohio Northern University and, with his father, founded the Union Metal Manufacturing Company in the fall of 1906. He served for a number of years as secretary and treasurer and also as a member of the sales staff. Because of his intimate knowledge of processes and equipment,

News Department continued on second left-hand page

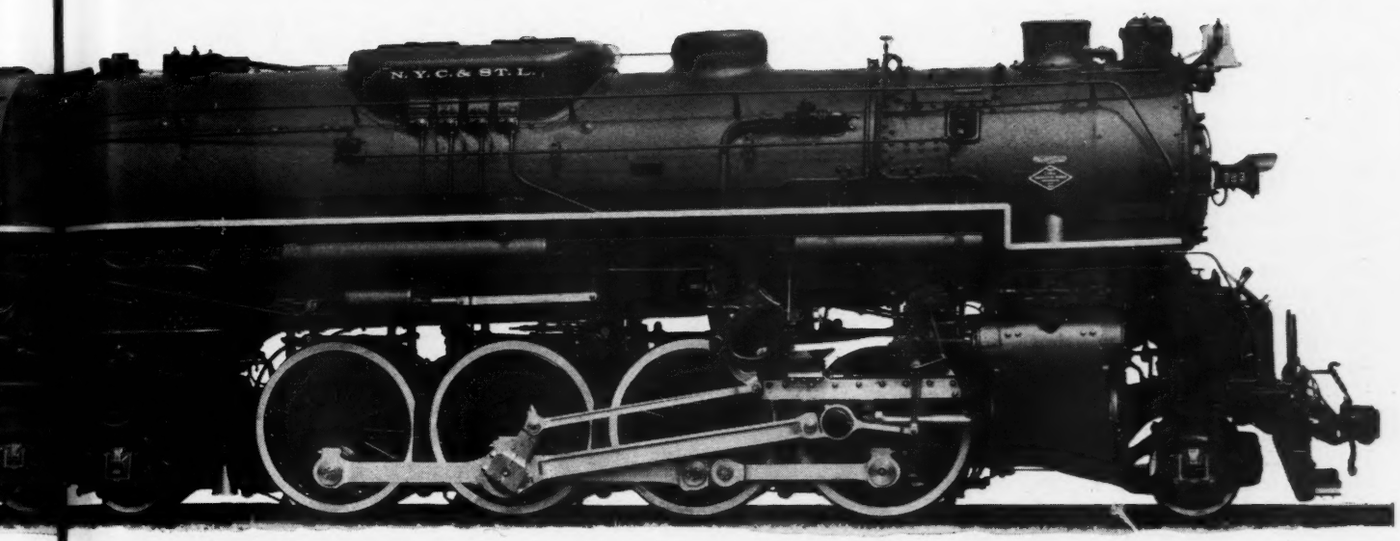
MORE LIMA-BUILT POWER

NEW YORK, CHICAGO & ST. LOUIS R. R. CO.

Weight in Working Order, Pounds					
On Drivers	Engine Truck	Trailer Truck	Total Engine	Tender Loaded 2/3 of Capacity	
64,500 each 258,000	53,500	50,000 F 59,000 B	421,000	283,400	
Wheel Base			Tractive	Tender Capacity	
Driving	Engine	Eng. & Tender	Effort	Coal	Water
18'-3"	42'-0"	87'-8¾"	64,100 lbs.	22 ton	22,000 gal.
Boiler		Cylinders		Driving Wheel	
Dia.	Pressure	Dia.	Stroke	Dia.	
87 15/16" O.D.	245 lbs.	25"	34"	69"	

LIMA LOCOMOTIVE WORKS

FOR THE NICKEL PLATE



Illustrated above is one of 10 high-speed, 2-8-4 type freight locomotives now being delivered to the Nickel Plate Road by the Lima Locomotive Works, Incorporated.

These locomotives are duplicates of the 15 placed in service last year which are today contributing to the Nickel Plate's fine record of hauling the tremendous volume of traffic resulting from the wartime emergency.

In addition, this progressive Road has placed still *another* order for 15 more units. This fleet of 40 modern Lima-built high-speed freight locomotives will aid the Nickel Plate materially in the all-important job of hauling heavier freight trains continuously at higher speeds---a job so essential to the prosecution of the war against the Axis and the preservation of our American way of life.

INCORPORATED, LIMA, OHIO

Mr. Barrick was serving during the present war emergency as co-ordinator of machine tool production.

Equipment and Supplies

Construction of Troop Cars Awaits Approval of Agencies

The construction and operation of 1,200 troop sleeping cars and 400 kitchen cars was approved by member roads of the Association of American Railroads at a special meeting at Chicago on March 26 and now awaits approval by the Defense Plant Corporation, a subsidiary of the Reconstruction Finance Corporation, and the War Production Board. Under the plan approved by the Association and the War department and endorsed by the Office of Defense Transportation, the cars will be contructed and owned by the Defense Plant Corporation and will be operated in the Pullman Company's fleet of cars used in the transportation of troops. The 1,200 sleeping cars will replace day coaches now used in the transportation of armed forces and the 400 kitchen cars will release baggage cars now used as mess cars by the Army. At present each Army unit sets up its own mess equipment in baggage cars and prepares the food for its men. Under the proposed arrangement, each of the 400 cars will have Army personnel assigned to it permanently.

The new sleeping cars will depart slightly from standard sleeping car construction but will be interchangeable on all railroads and operable in passenger trains. They will have standard passenger car trucks, underframes, couplers and brakes and standard passenger car clearances. The width will be 9 ft. and the length 50½ ft. They will contain 30 beds arranged crosswise of the car in tiers of three and capable of accommodating one person each. The construction will be such that the lower and second berths can be lowered into position to serve as the seat and the back of daytime accommodations. The sides of the cars will be insulated and the cars will be equipped with windows, heat, light and toilet facilities. Whether air-conditioning equipment will be installed has not been decided.

The structure of the kitchen cars will be similar to that of the sleeping cars. Although no sleeping accommodations will be incorporated in the kitchen cars, they will be equipped with showers. These cars will also be fitted with iceboxes, cupboards and ranges. It is expected that the 1,600 cars will be completed at the rate of 15 a day, beginning July 1, by builders to be selected by the Defense Plant Corporation.

Joseph B. Eastman, director of the Office of Defense Transportation, who was a guest at the meeting said, in an interview after the meeting, that this car construction program "unquestionably would go a long way towards relieving the passenger equipment situation." Mr. Eastman expressed the hope that rationing of railroad passenger travel can be avoided. He also forecast a 10 per cent increase in ton-miles in 1943, compared with 1942. Ton-miles in January and February, he said, were 29 per cent greater than in the corresponding period last year due to a heavier movement of petroleum products.

SIGNALING

THE GREAT NORTHERN has placed an order with the General Railway Signal Company for a desk type control machine for a route relay interlocking installation at Coon Creek, Minn. This machine is provided with eight route levers.

THE GALVESTON, HOUSTON & HENDERSON has placed an order for materials for automatic signaling installation, A. P. B., between Houston and Harrisburg, Texas, with the General Railway Signal Company. The order includes 13 Type D color-light signals, 6 highway crossing signals, 17 wired relay cases complete with relays, rectifiers, etc., and 1 relay case not wired.

THE TENNESSEE VALLEY AUTHORITY has placed an order for material for coded remote control and unit wire remote control with the General Railway Signal Company. This includes a control machine which is to be installed at Leadvale Jct., Tenn., on the Southern and will be operated by the Southern for the TVA. Other equipment furnished on this contract includes one "bungalow," one Model 5D switch layout, and four Type D color-light signals.

THE PACIFIC ELECTRIC has placed a contract with the General Railway Signal Company for materials necessary to make additions to its present electric interlocking system at Badger avenue, Los Angeles, Calif., as follows: four additional levers to be installed on the existing Model two interlocking machine, mechanical equipment for two derails, two 5B high-voltage switch layouts, two facing point locks for spring switches, two Type SA dwarf signals, and one tower relay and two signal relay cases completely wired with relays.

THE RICHMOND SHIPYARD RAILWAY, a rapid transit line to carry workers in the Kaiser Shipbuilding Yards at Richmond, Calif., to and from San Francisco, has awarded to the General Railway Signal Company a contract to furnish four "bungalows" completely wired for Type B relays covering the operation of four automatic interlockings at the intersection of this railway with branch lines of the Southern Pacific and the Atchison, Topeka & Santa Fe in Richmond. The order includes 7 Type SA searchlight signals, 12 Model 7 switch circuit controllers, 24 relay boxes, 17 copper-oxide rectifiers, 6 Type K interlocking relays, 6 Type B2 motor time relays, 6 Model B Form 2 tower indicators, 4 Type KB motor time relays, 4 K2 relays, 41 B2 track relays, 4 B1 power-off relays, 54 transformers, and the necessary material to complete the project.

Abandonments

CHICAGO & NORTH WESTERN.—Division 4 of the Interstate Commerce Commission has denied this road's application for authority to abandon its line from Belle Plaine, Iowa, to What Cheer, 37.69 miles, without prejudice to a renewal of the application after the current "shortage of short-haul trucking facilities" has been overcome.

CHICAGO, ROCK ISLAND & PACIFIC.—Division 4 of the Interstate Commerce Commission has denied this road's application for authority to abandon part of a branch line from Deshler, Neb., to Ruskin, 8.06 miles, without prejudice to renewal of the application if during the remainder of 1943 shippers fail to demonstrate that the line is essential.

LOUISVILLE & NASHVILLE.—At the request of the applicant, Division 4 of the Interstate Commerce Commission has dismissed without prejudice this company's application for authority to abandon 1 mile of line from Olcott, Ky., to Chenoa.

MISSOURI PACIFIC.—The Missouri Pacific in Nebraska, wholly owned by this road, has applied to the Interstate Commerce Commission for authority to abandon a line from Hastings, Neb., to Prosser, 14 miles.

NEW YORK CENTRAL.—Division 4 of the Interstate Commerce Commission has authorized this company to abandon a branch from Van Cortlandt Park Junction, in New York City, to Getty Square, in Yonkers, N. Y., 3.1 miles.

NORTHERN PACIFIC.—This company has applied to the Interstate Commerce Commission for authority to abandon two branch lines, as follows: (1) the line from Rush City, Minn., to Grantsburg, Wis., 17.05 miles; (2) the line from Wyoming, Minn., to Taylors Falls, 20.6 miles.

PERE MARQUETTE.—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a branch from Coleman, Mich., to Beaverton, 10.5 miles.

SOUTHERN PACIFIC.—This company has applied to the Interstate Commerce Commission for authority to abandon a portion of a branch line between Kerman, Calif., and Caruthers, 17.2 miles.

TEXAS & PACIFIC.—At the request of the applicant, Division 4 of the Interstate Commerce Commission has dismissed without prejudice this copany's application for authority to abandon its line from Texarkana, Tex., to Shreveport, La., 72 miles.

UNION PACIFIC.—In a proposed report in Finance Docket 13941 Examiner J. S. Prichard has recommended that the Interstate Commerce Commission authorize this Company to abandon operation of a branch line from a point near Freewater, Wash., to Umapine, 4.91 miles. A 0.77-mile segment of this line is owned by the Walla Walla

News Department continued on next left-hand page

FUEL

a strategic material

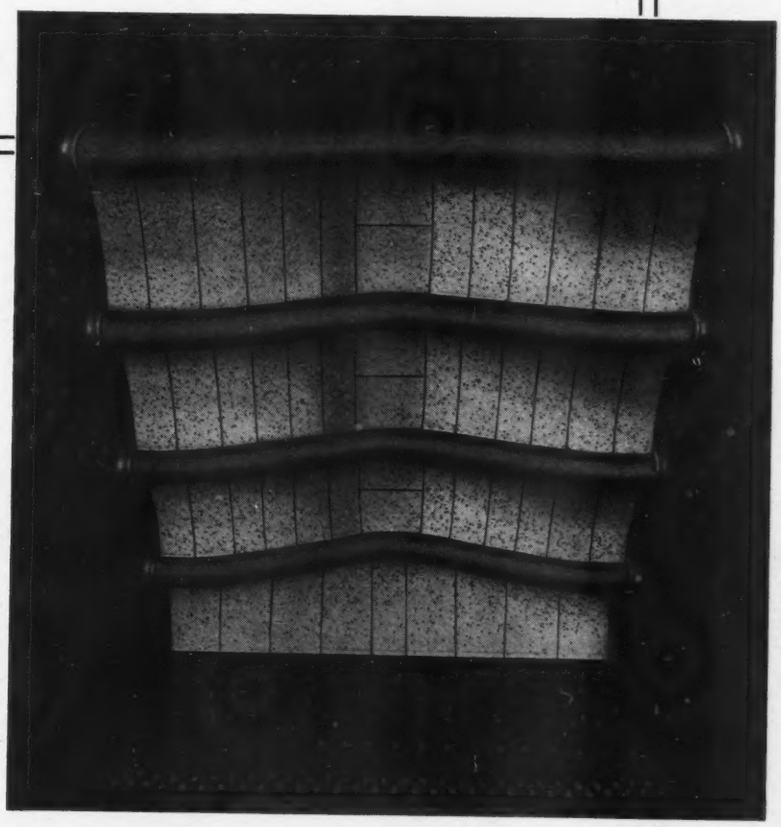
CONSERVED

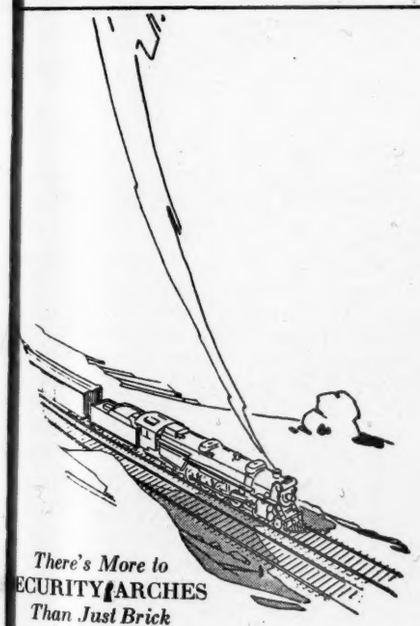
with Security Sectional Arches

Today, more than ever, fuel is one of our strategic materials. Making every pound of fuel produce the maximum amount of steam not only conserves this strategic material but also the cars required to transport it.

For over 32 years, Security Sectional Arches have been saving fuel on all types of steam locomotives.

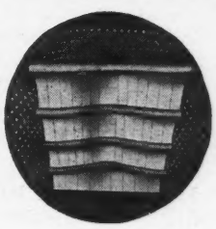
But experience has proved that only with a *complete* Arch can maximum fuel economy be realized.





HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists



AMERICAN ARCH CO.
INCORPORATED
60 EAST 42nd STREET, NEW YORK, N. Y.
Locomotive Combustion Specialists

Valley, controlled by the Northern Pacific indirectly by stock ownership, and the remainder of the line is owned jointly by the Walla Walla Valley and the Oregon-Washington Railroad & Navigation, controlled by the Union Pacific; both owning companies would be authorized to abandon their portions of the property if the examiner's recommendation is approved.

VIRGINIAN.—Division 4 of the Interstate Commerce Commission has authorized this company to abandon operation under trackage rights over a line of the Chesapeake & Ohio from Price Hill Junction, W. Va., through Price Hill, 2.42 miles, in lieu of which it will operate under trackage rights over the parallel Glen Jean subdivision of the C. & O.

Financial

ATLANTA & SAINT ANDREWS BAY.—*Promissory Notes.*—This road has applied to the Interstate Commerce Commission for authority to issue $500,000 of 2½ per cent promissory notes to mature in two years, the proceeds to be used for rail and other track material required to handle wartime traffic.

BALTIMORE & OHIO.—*Accepts Tenders on 18 Issues.*—The Baltimore & Ohio on March 25 accepted tenders of some of each of the 18 issues of system secured obligations which the railroad received pursuant to its invitation of February 25 (see *Railway Age* of March 6), at an over-all average price of $59.1964. The New York Transit & Terminal Co., Ltd., subsidiary of the B. & O., will accept delivery and make settlement for the bonds and notes between April 5 and 15, at New York. Part of the funds necessary to buy the issues will be advanced from the treasury of the B. & O., and part will be obtained through a temporary bank loan. The total amount covered by the accepted tenders will not be available until after deliveries have been completed. The railroad had announced, on January 28, accepting tenders covering $29,275,650 principal amount of the same group of bonds and notes under an invitation issued December 21, 1942. The previous acceptance covered 17 of the issues, tendered at an aggregate price of $12,898,120 or an over-all average price of $44.06 per $100 principal amount. (See *Railway Age* of February 6.)

The high price and average price per $100 principal amount at which tenders of the bonds and notes were accepted by the railroad on March 25 are shown in the accompanying table:

	High Price	Average Price
First mtg. 5s, 1948	76	74.0360
First mtg. 4s, 1948	75	73.0678
Southwestern Div. 5s, 1950	58	55.3793
Pitts., L. E. & W. Va., 4s 1951.	64	63.0883
Toledo-Cincinnati Div. 4s, 1959..	59	57.6969
Rfg. & Gen. "A" 5s, 1995	50	46.8123
Rfg. & Gen. "C" 6s, 1995	55	50.7108
Rfg. & Gen. "D" 5s, 2000	50	46.5479
Rfg. & Gen. "F" 5s, 1996	50	46.5583
Secured 4% notes, 1944	88	86.2587
Lincoln Park 5s, 1949	68	66.3077
Ohio, Little Kanawha 5s, 1950..	68	68.0000
Buffalo, R. & P. 4½s, 1957....	46	45.3946
Buffalo & Susquehanna 4s, 1963	70	70.0000
Cincinnati Ind. & West'n 5s, 1965	58	57.8242
West Va. & Pitts. 4s, 1990	70	68.3237
Cleveland T. & V. 4s, 1995	70	68.4511
Allegheny & W. 4s, 1998	70	70.0000

CANADIAN NATIONAL.—*Annual Report.*—The 1942 yearly report of this company shows a net income, after interest and other charges, of $27,282,498, compared with a net income of $5,438,961 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	23,494.22	−30.73
RAILWAY OPERATING REVENUES	$375,654,543	+$71,277,765
Maintenance of way and structures	57,656,538	+10,583,850
Maintenance of equipment	71,540,490	+16,391,802
Transportation	139,607,559	+21,526,499
TOTAL OPERATING EXPENSES	288,998,675	+51,230,238
Operating ratio	76.93	−1.19
NET REVENUE FROM OPERATIONS	86,655,869	+20,047,528
Railway tax accruals	6,020,141	−906,372
RAILWAY OPERATING INCOME	80,635,728	+20,953,900
Joint facility rents—Dr.	2,383,883	+120,626
NET RAILWAY OPERATING INCOME	74,930,222	+19,303,644
Miscellaneous income	1,295,022	+1,167
INCOME AVAILABLE FOR FIXED CHARGES	78,952,433	+20,351,118
Rent for leased roads and equipment	1,483,345	−16,031
Interest on funded debt—Public	34,949,558	−9,748,669
TOTAL FIXED CHARGES	51,669,935	−1,492,419
INCOME BALANCE TRANSFERRED TO PROFIT AND LOSS	$27,282,498	+$21,843,538

CHESAPEAKE & OHIO.—*Requests Equipment Trust Bids.*—The Chesapeake & Ohio is requesting bids for the purchase of $5,200,000 of serial equipment trust certificates to be dated May 1, 1943, and to mature in equal annual installments from May 1, 1944, to May 1, 1953. Bids must be received by April 15 and no bids of less than 99 will be considered. Proceeds of the sale will be used to finance, in part, the acquisition of 2,380 composite hopper cars of 50 tons' capacity to cost approximately $6,577,037.

CHESAPEAKE & OHIO.—*Proposed New Directors.*—Cyrus S. Eaton of Cleveland, Ohio, and Henry J. Guild of Adams, Mass., will be proposed as directors of the Chesapeake & Ohio at the stockholders' annual meeting on April 20, according to the railroad's proxy statement. Mr. Eaton, chairman of Steep Rock Iron Mines, Ltd., a Canadian mining corporation, is a large stockholder in Otis & Co., Inc., of Cleveland, which company was among those originally protesting the Erie's recent award of a $14,000,000 bond issue to Morgan Stanley & Co. When the I. C. C. subsequently upset this transaction, a substitute $10,000,000 issue was awarded to Otis & Co. and Halsey, Stewart & Co. of Chicago. Mr. Guild, who was elected to the board last January to fill a vacancy, is president of the Brightwater Paper Company of Adams.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Substitution of Equipment.*—This road has applied to the Interstate Commerce Commission for authority to substitute certain equipment in the place of 25 cabooses, 1,000 box cars and 400 automobile cars which it planned to buy under the agreement in which $2,744,000 of its series W equipment trust certificates were approved by the commission. As this portion of the equipment purchase was not completed, due to material restrictions, the road seeks authority to substitute under the trust 735 gondolas and 400 flat cars, all of 50 tons capacity, to be built in company shops, and 30 Diesel-electric locomotives of various types which were bought under conditional sales contracts.

DETROIT & MACKINAC.—*Annual Report.*—The 1942 annual report of this company shows a net income, after interest and other charges, of $234,470, compared with a net deficit of $3873 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
RAILWAY OPERATING REVENUES	$1,189,479	+$343,92
Maintenance of way and structures	171,336	+24,35
Maintenance of equipment	163,682	+29,36
Transportation—Rail Line	345,188	+31,83
TOTAL OPERATING EXPENSES	728,315	+85,02
Operating ratio	61.22	−14.88
NET REVENUE FROM OPERATIONS	461,164	+258,89
Railway tax accruals	53,262	+11,40
RAILWAY OPERATING INCOME	407,902	+247,41
Equipment rents—Dr.	66,107	+12,54
Joint facility rents	123	+1,11
TOTAL INCOME	347,800	+236,77
Interest on funded debt	110,449	−1,36
INCOME BALANCE TRANSFERRED TO PROFIT AND LOSS	$234,470	+$238,34

ERIE.—*Collateral Trust Notes.*—This company has applied to the Interstate Commerce Commission for authority to issue $10,000,000 serial collateral trust notes which it has sold by competitive bidding, subject to the commission's approval, as reported in this column (issue of March 27, page 647). As security for the issue the company will pledge $12,500,000 of its first consolidated mortgage bonds series B.

CHICAGO, ROCK ISLAND & PACIFIC.—*Reorganization.*—The District Court at Chicago has approved a motion by the trustees that all interested parties file, before April 10, any contentions that the reorganization of the Rock Island, as approved by the Interstate Commerce Commission, is inconsistent with a recent decision by the United States Supreme Court concerning railroad reorganization. In July, 1942, the District Court announced that reorganization of the Rock Island would be deferred until the United States Supreme Court rendered a decision on applications for certiorari of decisions of two Circuit Courts of Appeal in the reorganization of the Western Pacific and the Chicago, Milwaukee, St. Paul & Pacific. In both cases

News Department continued on next left-hand page

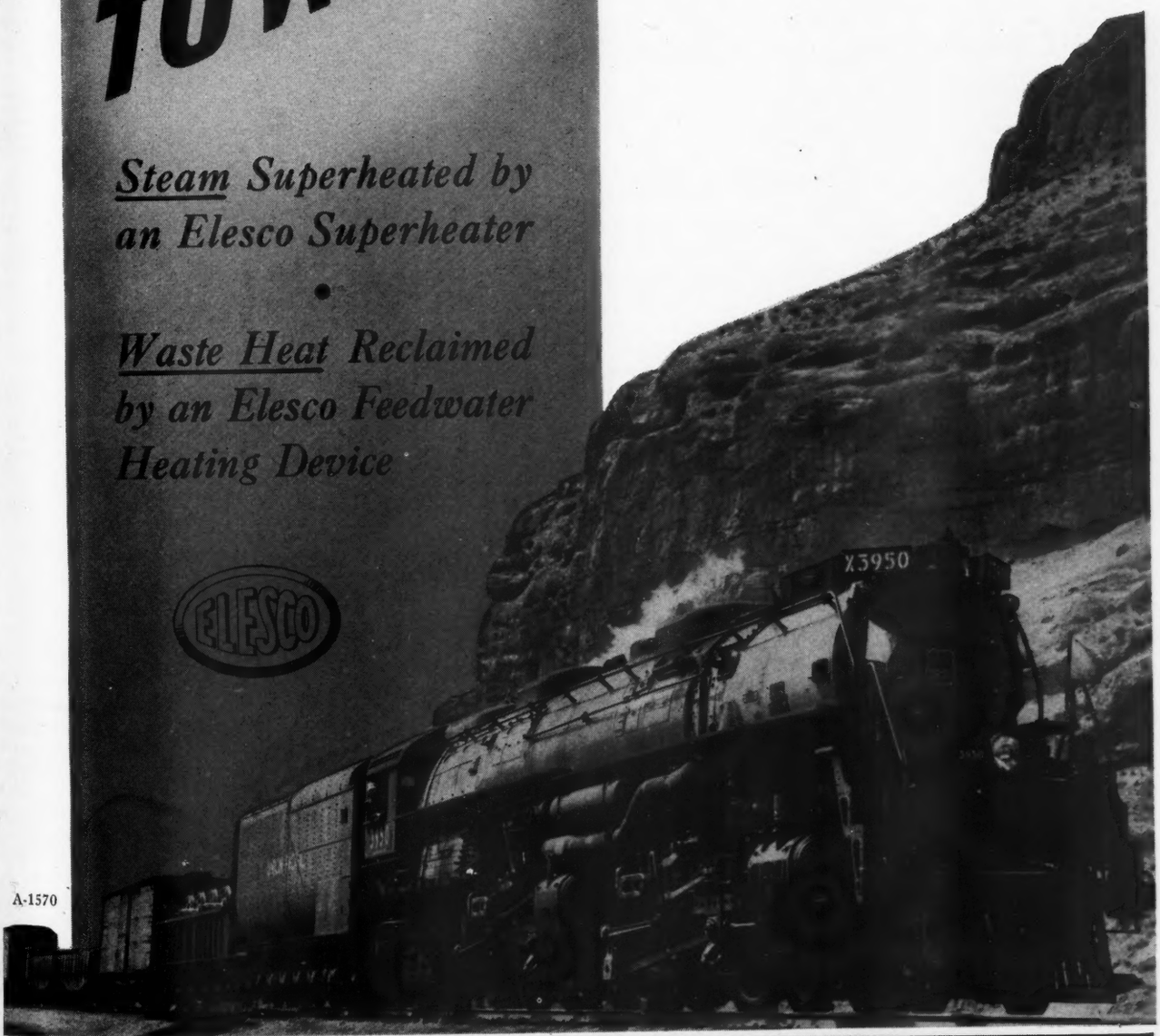
The POWER TO WIN!

Steam Superheated by an Elesco Superheater

•

Waste Heat Reclaimed by an Elesco Feedwater Heating Device

ELESCO



A-1570

THE SUPERHEATER COMPANY

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Blvd., CHICAGO

• • •

Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

the Supreme Court generally upheld the reorganization plans set up by the I. C. C. The I. C. C.'s modified plan for reorganization of the Rock Island, which likewise excludes preferred and common stockholders, has been opposed by all the interested parties, except the first and refunding bondholders group of institutional investors, the Choctaw, Oklahoma & Gulf bondholders committee and the Reconstruction Finance Corporation.

LEHIGH & NEW ENGLAND.—*Annual Report.*—The annual report of this road shows a net income, after interest and other charges, of $1,144,511, compared with net income of $938,792 in 1941. Selected items from the income statement follow:

	1942	Increase or Decrease Compared with 1941
RAILWAY OPERATING REVENUES	$6,163,392	+$880,905
Maintenance of way and structures	485,805	+81,700
Maintenance of equipment	1,258,702	+345,731
Transportation	1,744,865	+177,512
TOTAL OPERATING EXPENSES	3,789,948	+625,248
Operating ratio	61.49	+1.58
NET REVENUE FROM OPERATIONS	2,373,444	+255,657
Railway tax accruals*	1,065,468	+306,933
RAILWAY OPERATING INCOME	1,307,977	−51,276
Net rent—Cr.	167,584	+138,647
NET RAILWAY OPERATING INCOME	1,475,561	+87,371
Total other income	27,146	+741
TOTAL INCOME	1,502,706	+88,112
Income available for fixed charges	1,486,171	+90,084
Interest on funded debt	317,652	−18,069
TOTAL FIXED CHARGES	341,660	−11,324
NET INCOME	1,144,511	+101,408
Disposition of net income: Income applied to sinking and other reserve funds	114,451	+10,141
Balance of income transferred to profit and loss	$1,030,059	+$91,267

* Including Company's estimate of Federal taxes.

LONG ISLAND.—*Annual Report.*—Demands of Unions for wage increases, if granted, would add over $5,000,000 per annum to the costs of the Long Island, M. W. Clement, president, reveals in the company's report for 1942. And "if the rate increases made effective during the year on this railroad should be cancelled, the result would be a reduction in the company's revenue, per annum of $1,400,000," Mr. Clement adds.

As it was—with present wages and rates, 1942 income was insufficient to meet fixed charges by $15,047. With the exception of 1936, the payment of operating costs, taxes and fixed charges has left the railroad with insufficient revenue to pay the interest on its bonds, and except for the financial support of the Pennsylvania, the company would long since have been in receivership. Selected items from the consolidated income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	377.99	−.24
RAILWAY OPERATING REVENUES	$34,966,725	+$8,127,328
Maintenance of way and structures	5,668,730	+2,837,302
Maintenance of equipment	5,117,687	+886,905
Transportation	14,590,014	+2,553,564
TOTAL OPERATING EXPENSES	26,296,765	+6,512,194
Operating ratio	75.21	+1.50
NET REVENUE FROM OPERATIONS	8,669,960	+1,615,134
Railway tax accruals	4,391,123	+329,813
RAILWAY OPERATING INCOME	4,278,837	+1,285,321
Hire of Equipment —Net Dr.	1,228,856	+77,128
Joint facility rents —Net Dr.	1,047,244	−26,663
NET RAILWAY OPERATING INCOME	2,002,737	+1,234,856
Non-operating income	371,967	+35,405
GROSS INCOME	2,374,704	+1,270,261
Rent for leased roads	195,000	.....
Interest on funded debt	2,027,514	−18,020
TOTAL DEDUCTIONS FROM GROSS INCOME	2,389,750	−5,378
LOSS TRANSFERRED TO PROFIT AND LOSS	$15,047	−$1,275,639

MINNEAPOLIS & ST. LOUIS.—*Reorganization Plan Modified.*—An intention to reorganize the Minneapolis & St. Louis without borrowing has been announced by Coverdale & Colpitts, reorganization managers. The accumulation of cash due to wartime earnings has enabled the road to carry out a program of rehabilitation and it is expected that this improved cash condition will continue and permit additional improvements and betterments in the future. The receivership is expected to be terminated about June 1.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—*Acquisition and Operation.*—This company has applied to the Interstate Commerce Commission for authority to acquire without substantial cost to it, and to operate, a 10.73-mile line to be constructed between Camden, Tenn., and Denver by the Tennessee Valley Authority to replace an existing line which is to be removed to make way for a reservoir.

NEW YORK, CHICAGO & ST. LOUIS.—*Annual Report.*—The pamphlet report for 1942 of the New York, Chicago & St. Louis, like the one of its sister road, the Chesapeake & Ohio, appears in new illustrated format. John W. Davin, president, in a letter to the stockholders included in the pamphlet, stated that the first year of the war brought increases in traffic far beyond what conservative railroad men would have estimated the Nickel Plate could carry and has resulted in a considerable improvement in the company's financial position.

Referring to the disposition of earnings, Mr. Davin said the present policy of the company was debt reduction before dividends and that during the year the railroad's indebtedness was reduced by $7,879,858, of which about $2,500,000 represents repayment of a bank loan maturing in 1942 with the remainder devoted to retirement of bonds and debentures maturing within the next few years. He pointed out that the railroad has outstanding some $21,000,000 of first mortgage bonds due in 1947 which cannot be extended at maturity because of a commitment to holders of the junior refunding bonds, and that, with its large burden of debt, the first objective of the railroad must be the re-establishment of its credit. There are approximately $25,000,000 of unpaid dividends accumulated on the preferred stock which must be satisfied before dividends can be paid on the common stock.

Selected items from the consolidated income statement follow:

	1942	Increase or Decrease Compared with 1941
Average Mileage Operated	1,688.47	−1.54
RAILWAY OPERATING REVENUES	$88,742,413	+$28,523,124
Maintenance of way and structures	6,984,222	+1,714,797
Maintenance of equipment	10,597,044	+2,806,500
Transportation	25,543,714	+6,660,766
TOTAL OPERATING EXPENSES	46,470,511	+11,509,212
Operating ratio	52.37	−5.69
NET REVENUE FROM OPERATIONS	42,271,902	+17,013,912
Railway tax accruals	22,827,546	+19,247,982
RAILWAY OPERATING INCOME	19,444,356	−2,234,070
Equipment rents —Net Dr.	5,688,496	+2,046,866
Joint facility rents —Net Dr.	532,879	+64,198
NET RAILWAY OPERATING INCOME	13,222,981	−4,345,134
Other income	401,894	−2,309
TOTAL INCOME	14,711,934	−5,040,834
Rent for leased roads and equipment	3,532	.....
Interest on debt	5,830,455	−1,040,414
NET INCOME	8,690,571	−3,996,120
Disposition of net income: Income applied to sinking and other reserve funds	98,134	−29
Income balance transferred to profit and loss	$8,592,438	−$3,996,091

NORTHERN PACIFIC.—*Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for $3,200,000 serial equipment trust certificates, to be dated May 1, 1943, and maturing in 10 annual installments of $320,000, the interest rate and sale price to be determined by competitive bidding. The proceeds are to be applied to the purchase of equipment estimated to cost $4,117,270, including 10 locomotives of 4-8-4 type to be built by the Baldwin Locomotive Works, and 250 composite-type 70 ton hopper cars and 300 flat cars of 50 ton capacity to be built by the American Car & Foundry Company.

Average Prices Stocks and Bonds

	Mar. 30	Last week	Last year
Average price of 20 representative railway stocks..	35.59	33.88	24.88
Average price of 20 representative railway bonds..	76.23	75.09	66.68

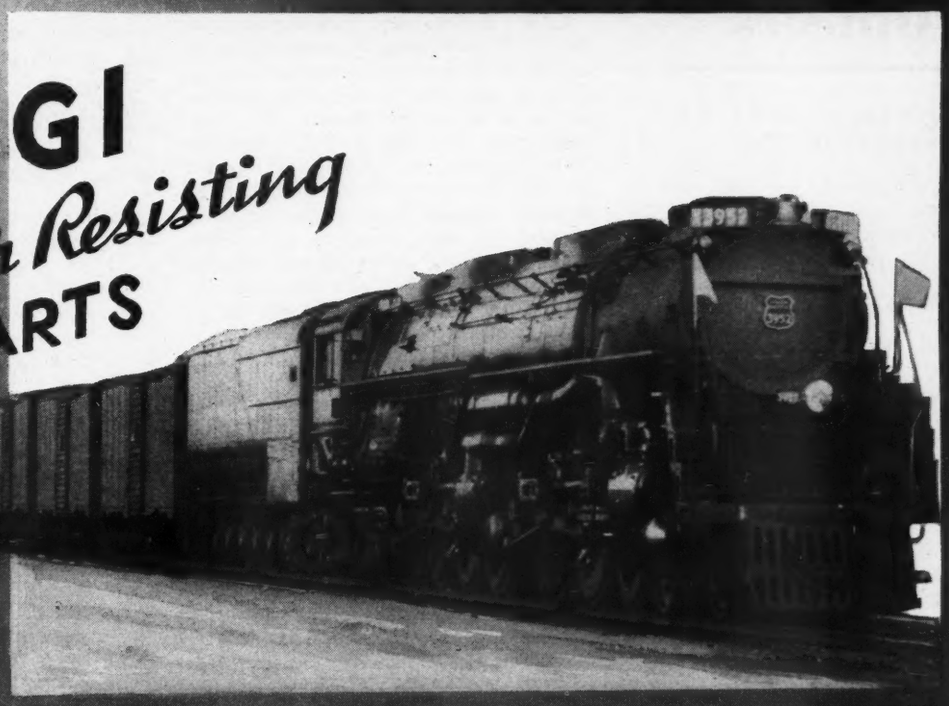
Dividends Declared

Atchison, Topeka & Santa Fe.—$1.50, payable June 1 to holders of record April 30.

Atlantic Coast Line.—5 Per Cent Non-Cumulative Preferred, $2.50, semi-annually, payable May 10 to holders of record April 23.

News Department continued on next left-hand page

HSGI
Wear Resisting PARTS



INCREASE AVAILABILITY

THIS battle on the transportation front demands the maximum hours of operation that can be obtained from your power.

Naturally, the quality of the Wearing Parts is a vital factor. Maximum availability can not be assured with the use of ordinary materials.

Wearing Parts made from HUNT-SPILLER *Air Furnace* GUN IRON will help to keep your power rolling up maximum revenue miles per month at minimum cost for fuel and materials.

HSGI
Reg. U. S. Trade Mark
Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings
Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings
Finished Parts
Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings All Shapes
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

HUNT-SPILLER MFG. CORPORATION
V. W. Ellet, *President* — E. J. Fuller, *Vice-Pres. & Gen. Mgr.*

383 Dorchester Ave. *Office & Works* South Boston, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.
Export Agent for Latin America:
International Rwy. Supply Co., 30 Church Street, New York, N. Y.

HUNT-SPILLER
Air Furnace GUN IRON

Railway Officers

FINANCIAL, LEGAL AND ACCOUNTING

Oscar Lindstrand and **Michael J. Haberkarn,** assistant solicitors of the Western region of the Pennsylvania, with headquarters at Chicago, have been promoted to assistant general solicitors, a change of title.

Robert R. Pierce, assistant to the general attorney of the New York Central, has been promoted to assistant general attorney, with headquarters as before at Cleveland, Ohio, succeeding **D. G. Jaeger,** who has retired.

H. D. Barnes, auditor of capital expenditures of the Chicago & North Western, has been promoted to assistant general auditor, with headquarters as before at Chicago, a newly-created position. **J. A. Wood,** cost engineer, has been advanced to auditor of capital expenditures, succeeding Mr. Barnes.

OPERATING

W. F. Stone, chief dispatcher of the Chesapeake & Ohio, has been appointed assistant trainmaster, with headquarters at Huntington, W. Va.

C. H. Burden has been appointed assistant superintendent of dining cars of the Atlantic Coast Line, with headquarters at Washington, D. C.

A. L. Springfield has been appointed trainmaster of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Ennis, Texas.

Robert C. Owenby, trainmaster of the Chicago, Rock Island & Pacific at El Reno, Okla., has been promoted to assistant superintendent of the Panhandle division, with headquarters at Dalhart, Tex. **Forrest B. Gibbs,** assistant superintendent at Dalhart, has been appointed trainmaster at El Reno.

O. D. Crill, trainmaster of the Missouri division of the Atchison, Topeka and Santa Fe, at Marceline, Mo., has been promoted to division superintendent, with the same headquarters. **J. B. Noe,** who was superintendent of both the Missouri and Illinois divisions, continues with jurisdiction over the Illinois division only.

L. D. Hickey, assistant division superintendent of the Canadian National at Calgary, Alta., has been promoted to division superintendent, with headquarters at Prince Albert, Sask., succeeding **J. D. Healy,** who has been transferred to Regina, Sask., replacing **I. A. MacPherson,** who has retired. **W. A. Stewart,** secretary to the vice-president in charge of operation, maintenance and construction, with headquarters at Montreal, Que., has been advanced to assistant superintendent at Calgary, succeeding Mr. Hickey.

A. F. McSweeney, superintendent of freight transportation, Western region of the Pennsylvania, with headquarters at Chicago, has been promoted to superintendent of car service, system, with headquarters at Philadelphia, Pa., succeeding **J. B. Phelan** whose death was reported in the *Railway Age* of March 27. **J. P. Newell,** superintendent of the St. Louis division, has been promoted to superintendent of freight transportation, replacing Mr. McSweeney. **J. W. Leonard,** superintendent of the Erie and Ashtabula division, with headquarters at New Castle, Pa., has been transferred to the St. Louis division, succeeding Mr. Newell.

L. E. Gingerich, engineer maintenance of way of the Pennsylvania at Pittsburgh, Pa., has been appointed superintendent of the Delmarva division of that road, with headquarters at Cape Charles, Va. Mr. Gingerich was born on December 7, 1899, at York, Pa. After serving in the United States Army during 1918, he entered Gettysburg college, and was graduated from that institution in 1922 with a B. S. degree in civil engineering. He was employed

L. E. Gingerich

for a short time in the Pennsylvania State Highway department, and on December 4, 1922, entered the service of the Pennsylvania as a rodman in the office of the division engineer of the New York division at Jersey City, N. J., subsequently being transferred to the Baltimore division, and later to the Philadelphia division. Mr. Gingerich served as assistant supervisor-track on the New York, Baltimore and Philadelphia divisions, and on July 7, 1928, he was promoted to supervisor-track; in which capacity he served on the Williamsport, Philadelphia and Baltimore divisions. On April 16, 1934, he received a special assignment to rehabilitate the Baltimore Tunnels in connection with the Pennsylvania's electrification of its main line track from Wilmington, Del., to Washington, D. C. On November 16, 1934, he was appointed assistant division engineer of the New York division at Jersey City, and on May 1, 1936, he became division engineer of the St. Louis division, subsequently being transferred to the Chicago Terminal division. On June 1, 1941, Mr. Gingerich was assigned to special duty in the office of the chief engineer at Philadelphia, Pa., and on April 16, 1942, he became engineer maintenance of way of the Western Pennsylvania division at Pittsburgh, the post he was maintaining at the time of his appointment as superintendent of the Delmarva division at Cape Charles.

Arthur F. Carshner, whose promotion to superintendent of the Gary division of the Elgin, Joliet & Eastern was reported

Arthur F. Carshner

in the *Railway Age* of March 27, was born at Joliet, Ill., on March 23, 1889, and entered railway service on March 26, 1900, as a yard clerk of the E. J. & E., at Coal City, Ill. In 1909 he entered service as a brakeman at Joliet, and three years later he was promoted to conductor. In 1936 Mr. Carshner was advanced to yardmaster at Whiting, Ind., and in November, 1937, he was promoted to assistant trainmaster, with headquarters at Joliet. In 1940 he was advanced to trainmaster at Gary, Ind., holding that position until his new appointment, effective March 23.

Marion Streett, whose promotion to superintendent of the Monongahela division of the Pennsylvania, with headquarters at Pittsburgh, Pa., was announced in the *Railway Age* of March 6, was born at Grogan, Ohio, and entered railroad service as a messenger on the Toledo division of the Pennsylvania in 1912. He subsequently served on that division as yard clerk, chief yard clerk and acting general yardmaster until 1925, when he was appointed general yardmaster. After serving on the Ft. Wayne and Grand Rapids divisions, Mr. Streett was appointed trainmaster at Columbus, Ohio in 1939. He was transferred to the Maryland division in 1942, and remained at that post until his recent appointment as division superintendent.

TRAFFIC

Thomas J. Murphy, traveling freight agent of the Chicago, Rock Island & Pacific, has been appointed acting general agent, with headquarters as before at Colorado Springs, Colo., replacing **Milton H. Booth,** who has been granted leave of ab-

News Department continued on second right-hand page

sence to enter the service of the Condon-Cunningham Company which will operate a barge-ship system for the U. S. Government on the Athabaska-Mackenzie rivers in Canada.

R. Bert Weaver, city passenger agent of the Alton, has been promoted to general agent, passenger department, with headquarters as before at Chicago.

W. L. Simmons has been appointed general agent, freight traffic department, of the Reading, at Wilmington, Del., succeeding J. P. O'Neill who has been transferred.

J. R. Ray has been appointed division freight agent of the New York Central with headquarters at Louisville, Ky., succeeding **A. F. Meyer,** who has retired under pension regulations.

H. C. Atkinson, chief of the Ohio Bureau of Unemployment Compensation, has been appointed industrial manager of the Akron, Canton & Youngstown, with headquarters at Akron, Ohio.

G. A. Van Gieson, general agent of the Louisville & Nashville at Cleveland, Ohio, has been appointed division freight agent, with headquarters at Lexington, Ky. **C. F. Stith,** division freight agent at Nashville, Tenn., has been appointed general agent at Cleveland, succeeding Mr. Van Gieson.

F. E. Deines, division freight agent of the Chicago, Burlington & Quincy, with headquarters at Burlington, Iowa, has been appointed acting general freight agent of the Missouri district, with headquarters at St. Louis, Mo., succeeding **R. Wright Armstrong,** who has been granted leave of absence to serve in the U. S. Army. **V. G. Wright,** commercial agent at Oklahoma City, Okla., succeeds Mr. Deines as division freight agent at Burlington.

Cecil Moore, assistant to the vice-president of the Atlantic & East Carolina, has been appointed traffic manager and superintendent of agencies at New Bern, N. C. Mr. Moore was born on April 8, 1897, at Williamston, N. C., and entered railroad service in 1916 as clerk operator of the Atlantic Coast Line at Plymouth, N. C. He remained with the Atlantic Coast Line until 1930 when he went with the Norfolk Southern as commercial agent at Raleigh, being transferred to Charlotte, N. C., in 1933. Leaving the Norfolk Southern in April, 1936, he became commercial agent of the Atlantic & North Carolina, and when this road was taken over by the Atlantic & East Carolina in September, 1939, he was appointed assistant to the vice-president.

A. S. Jennings, general coal freight agent of the Pennsylvania at Philadelphia, Pa., has been promoted to general coal and ore agent, with headquarters at Cleveland, Ohio, succeeding the late **J. H. Cross. C. L. Eberly,** coal freight agent, has been promoted to general coal freight agent, with headquarters as before at Philadelphia, succeeding Mr. Jennings. **A. L. Graburn, Jr.,** who continues as coal freight agent at Philadelphia, has been assigned to the duties heretofore performed by Mr. Eberly, while **C. F. Miller,** chief clerk in the coal traffic department, has been promoted to coal freight agent at Philadelphia, succeeding Mr. Graburn. **W. S. Mahle,** district coal and ore agent, has been promoted to coal and ore agent, with headquarters as before at Cleveland, and **M. F. Klein,** acting general coal freight agent at Chicago, has been appointed general coal freight agent at that point, succeeding **Henry W. Large,** who is on furlough from the road while serving as an officer in the United States Army.

J. A. Behrle, whose promotion to assistant freight traffic manager of the Alton, with headquarters at Chicago was reported in the *Railway Age* of March 27, was born in Chicago on September 1, 1887, and entered railway service on August 6, 1903, as a clerk of the Chicago & Alton (now the Alton), later serving as rate clerk and tariff clerk. In September, 1912, he was advanced to chief of the tariff bureau, later serving as assistant general freight agent, general freight agent, and freight traffic manager of the C. & A. In 1929 when the Baltimore & Ohio acquired control of the C. & A., and it became the

J. A. Behrle

Alton, Mr. Behrle was appointed assistant freight traffic manager of the Alton. On February 1, 1933, when the B. & O. and Alton managements were consolidated, he was appointed general freight agent of the Alton and the Western lines of the B. & O., with headquarters at Chicago, which position he held until his recent promotion.

R. C. Winchester, district freight agent of the Pennsylvania at Scranton, Pa., has been appointed general freight agent of the Lehigh & Hudson with headquarters at Warwick, N. Y. Born at Phoenixville, Pa., in 1905, Mr. Winchester was graduated from Lehigh University in 1926, following which he continued his studies at the Harvard Graduate School of Business Administration, receiving an M.B.A. degree in railroad transportation from that institution in 1928. On August 1, 1928, he entered railroad service as a tariff clerk in the general office of the Pennsylvania at Philadelphia, Pa., being promoted to rate clerk in 1929, and to rate and diversion clerk in the division freight agent's office at Philadelphia in 1930. He was appointed freight representative in the division freight agent's office at Baltimore, Md., in 1936, and was transferred to York, Pa., in 1938. In 1939 Mr. Winchester returned to Philadelphia, as coal freight representative, holding this position until 1940, when he was appointed district freight agent at Scran-

R. C. Winchester

ton, the position he occupied at the time of his recent appointment as general freight agent of the Lehigh & Hudson.

R. E. Drummy, whose promotion to assistant traffic manager of the Union Pacific, with headquarters as before at Los Angeles, Cal., was reported in the *Railway Age* of March 27, was born at Omaha, Neb., in 1891 and entered railway service in 1910 as a stenographer of the general passenger department of the Union Pacific in that city. He served in various capacities in Chicago and New York and in 1918 he was sent to Washington, D. C., where he remained throughout the period of federal control. In 1923 Mr. Drummy was appointed traveling freight and passenger agent, with headquarters at Fresno, Cal.,

R. E. Drummy

and four years later he was promoted to general agent at Santa Ana, Cal., being transferred to Riverside, Cal., in 1929.

John H. Walkmeyer, whose promotion to general freight agent of the Alton, with headquarters at Chicago, was reported in the *Railway Age* of March 27,

News Department continued on next left-hand page

was born at Pittsburgh, Pa., on January 24, 1889, and graduated from the Pittsburgh Academy, Pittsburgh, in 1905. He entered railroad service in January, 1906, as a clerk of the Pennsylvania at Pittsburgh, and in 1907 he became a clerk of the Chicago & Alton (now the Alton) at Pittsburgh. In 1911 Mr. Walkmeyer was promoted to traveling freight agent, with the same headquarters, and from 1912 to 1914 he served as commercial agent at Buffalo, N. Y., and Cleveland, Ohio. During the period of federal railroad control he left the service on furlough, returning to the C. & A. on April 1, 1920, as general agent at Cleveland, being transferred to Pittsburgh in 1923. On September 1, 1929, Mr. Walkmeyer was advanced to assistant general freight agent, with headquarters at Chicago. He was transferred to Kansas City, Mo., on August 1, 1941, where he was located until his new appointment, effective March 15.

ENGINEERING & SIGNALING

Charles H. Sandberg, whose promotion to assistant bridge engineer, system, of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, was reported in the *Railway Age* of March 6, was born at Minneapolis, Minn., on September 29, 1901, and graduated in civil engineering from the University of Minnesota in 1929. He entered railroad service in 1926 as a draftsman of the Santa Fe, with headquarters at Chicago, and in 1930 he was promoted to

Charles H. Sandberg

assistant engineer, holding that position until his new appointment, effective March 1.

J. M. Wuerpel has been appointed supervisor of signals of the Gulf, Mobile & Ohio, with headquarters at Mobile, Ala.

Crosby Miller, bridge engineer of the Chesapeake & Ohio, has been appointed assistant chief engineer, with headquarters as before at Richmond, Va., succeeding **L. T. Nuckols,** whose appointment as engineer maintenance of way at Richmond, was reported in the *Railway Age* of March 27. **C. H. Chapin,** designing engineer in the office of the bridge engineer, has been appointed bridge engineer, with headquarters as before at Richmond, succeeding Mr. Miller. Born on September 1, 1881, at San Francisco, Cal., Mr. Miller was graduated from the University of California in 1904, and entered the employ of the Phoenix Bridge Co. at Phoenixville, Pa., during the same year. He subsequently was employed successively by the New York Central at New York; C. W. Hudson, consulting engineer, at New York, and the Pennsylvania Steel Co., at Steelton, Pa. Mr. Miller entered railroad service in 1914 as bridge engineer of the Chesapeake & Ohio and remained in that position until his recent appointment as assistant chief engineer at Richmond.

Louis H. Powell, whose promotion to assistant to the chief engineer, system, of the Atchison, Topeka & Santa Fe, with

Louis H. Powell

headquarters at Chicago, was reported in the *Railway Age* of March 6, was born at Baird, Tex., on July 16, 1891, and graduated from the Texas A & M college. He entered railway service in 1917 as a computer of the Santa Fe at Amarillo, Tex., and two years later was advanced to accountant, with headquarters at Chicago. In 1920 Mr. Powell was promoted to assistant engineer, with the same headquarters, holding that position until his new appointment, effective March 1.

J. D. Moffat, assistant to the chief engineer of the Western region of the Pennsylvania, has been promoted to chief engineer of the Western region, with headquarters as before at Chicago, succeeding **Isaac W. Geer,** who retired on March 31. **G. W. Patterson,** assistant engineer at Chicago, has been advanced to assistant to the chief engineer of the Western region, replacing Mr. Moffat.

MECHANICAL

W. G. Reid, assistant superintendent of motive power of the Southern Pacific at El Paso, Tex., has been promoted to superintendent of motive power, with the same headquarters, succeeding **R. V. Lipscomb,** who has retired. **D. R. Calleri,** master mechanic of the Rio Grande division, has been promoted to assistant superintendent of motive power, replacing Mr. Reid. **A. H. Johnstone,** assistant master mechanic, has been advanced to master mechanic succeeding Mr. Calleri.

R. W. Wilson, general foreman of the Canadian Pacific, has been promoted to division master mechanic, with headquarters as before at Moose Jaw, Sask., succeeding **David Beath,** who has been transferred to Calgary, Alta., replacing **F. C. Johnson,** who has been appointed locomotive foreman at Sutherland, Sask.

H. I. Phelps has been appointed master mechanic of the Erie, with headquarters at Avoca, Pa., succeeding **F. D. Kennedy,** who has been transferred to Marion, Ohio, to succeed **C. J. Gerbes,** who has been granted a leave of absence. **Frank Revana** has been appointed master mechanic of the Mahoning division with jurisdiction over Cleveland, Ohio; Brier Hill, Niles, Leavittsburg, Akron, and Ferrona, Pa.

SPECIAL

Dr. K. C. Walden has been elected superintendent and medical director of the relief department of the Atlantic Coast Line, with headquarters at Wilmington, N. C.

Benton W. Smith, trainmaster of the Missouri Pacific, with headquarters at Jefferson City, Mo., has been appointed superintendent of safety, with headquarters at St. Louis, Mo., succeeding **C. F. Larson,** whose retirement was reported in the *Railway Age* of January 9.

OBITUARY

Herbert S. Balliet, consulting engineer, who retired as special engineer of the New York Central in 1932, died on December 29, at his home at West Nyack, N. Y. He was 75 years old.

THE CENTRAL VERMONT recently contributed four steel railway bridges, an estimated weight of 650 tons, to the nation's scrap pile. Three of the bridges, spanning the Winooski and White rivers in Vermont, have been unused by the railroad since the Vermont flood in 1927, when they were so severely damaged that new spans had to be built to replace them. The other bridge, over the Connecticut river at E. Northfield, Mass., was put out of commission during the New England hurricane in 1938 and was also replaced. The steel in this bridge, alone, is estimated at 150 tons.

"GROW VEGETABLES FOR VICTORY," is the title of a special pamphlet issued to employees of the Pennsylvania urging them to plant gardens of their own or to cooperate in community planting efforts. The pamphlet, which is issued by the road in cooperation with the Department of Agriculture and the OCD, sets up a sample home garden plan for a plot 30 by 50, giving dates for planting various vegetables, distance required between rows, depth seed should be planted and the distance between plants, etc. The sample garden is planned to supply the average family of four with enough vegetables for the entire summer.

Table of Freight Operating Statistics appears on next left-hand page

Photo U. S. Army Signal Corps

CAST ARMOR... an important contribution of the Steel Castings Industry to the war effort

THE ARMY'S newest and best tanks are by weight 60% cast steel. Casting the armor for tanks—a new process—substantially reduces the cost compared with former methods.

The properties of Steel Castings that make these better tanks possible, and deliver them in less time, are the same properties that will permit you to build a better, more efficient and more economical product.

For information, consult your own steel foundry, or write to Steel Founders' Society of America, 920 Midland Bldg., Cleveland, Ohio.

MODERNIZE AND IMPROVE YOUR PRODUCT WITH

STEEL CASTINGS

Freight Operating Statistics of Large Steam Railways—Selected

Region, road, and year	Miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (*thousands*)	Car-miles: Per cent loaded	Ton-miles (*thousands*): Gross excl. locos. & tenders	Ton-miles (*thousands*): Net-rev. and non-rev.	Road locos. on line: Serviceable: Unstored	Road locos. on line: Serviceable: Stored	Road locos. on line: B. O.	Road locos. on line: Per cent B. O.
New England Region:												
Boston & Albany 1943	362	159,753	192,625	35,179	3,713	60.6	255,600	107,837	81	..	13	13.8
1942	362	161,040	171,437	15,218	3,780	70.3	208,949	78,959	62	11	15	17.0
Boston & Maine 1943	1,812	435,788	513,791	57,146	13,165	63.7	914,264	409,889	159	..	18	10.2
1942	1,854	345,956	396,667	34,435	12,441	70.2	719,280	286,241	152	5	16	9.2
N. Y., New H. & Hartf.† 1943	1,816	485,891	606,218	58,305	16,474	66.8	1,053,619	473,441	230	11	26	15.2
1942	1,816	452,103	587,675	50,802	16,748	70.3	916,803	361,937	205	5	48	19.1
Great Lakes Region:												
Delaware & Hudson 1943	848	333,963	400,392	40,373	11,738	62.5	874,035	449,201	151	38	35	15.6
1942	849	322,768	377,374	43,529	11,761	65.4	785,485	376,615	136	27	75	31.5
Del., Lack. & Western 1943	982	408,747	496,859	77,910	15,519	63.7	1,075,809	495,992	152	4	36	18.8
1942	982	391,136	451,224	63,509	15,659	70.6	945,148	413,130	149	18	33	16.5
Erie 1943	2,242	984,740	1,068,257	81,501	41,027	65.5	2,730,355	1,243,454	303	7	77	19.9
1942	2,251	880,140	930,601	54,739	38,981	71.0	2,342,406	965,627	279	43	91	22.0
Grand Trunk Western 1943	1,026	296,853	306,720	3,344	8,705	64.1	590,911	262,700	71	2	9	11.0
1942	1,023	284,080	287,943	1,906	8,230	65.7	506,449	194,717	68	1	19	21.6
Lehigh Valley 1943	1,248	476,157	520,874	74,517	18,639	60.7	1,343,154	632,801	143	..	14	8.9
1942	1,251	398,398	435,407	71,229	15,875	68.2	1,006,964	453,181	137	12	39	20.7
New York Central 1943	10,425	3,826,455	4,159,708	268,020	132,294	60.0	9,745,951	4,539,387	1,194	17	215	15.1
1942	10,497	3,455,165	3,715,154	234,514	119,950	63.1	8,068,546	3,575,373	1,137	57	201	14.4
New York, Chi. & St. L..... 1943	1,657	914,189	924,879	11,620	31,768	61.0	2,237,219	1,013,192	167	..	14	7.7
1942	1,657	758,685	773,326	11,364	26,256	67.6	1,627,029	678,440	156	..	13	7.7
Pere Marquette 1943	1,998	486,161	515,516	12,813	13,595	63.3	963,340	453,226	141	3	19	11.7
1942	2,021	401,867	416,145	9,749	11,465	65.2	737,590	310,762	134	6	23	14.1
Pitts. & Lake Erie 1943	233	100,600	104,748	....	4,142	63.4	364,639	216,344	38	5	11	20.4
1942	232	102,690	105,683	....	4,017	63.3	335,101	191,035	44	..	16	26.7
Wabash 1943	2,381	750,263	775,189	17,233	24,743	63.5	1,713,465	774,741	182	9	34	15.1
1942	2,397	670,938	688,428	15,461	22,911	69.6	1,368,433	552,493	150	30	76	29.7
Central Eastern Region:												
Baltimore & Ohio 1943	6,116	2,442,192	2,998,687	352,549	73,858	60.8	5,499,053	2,645,277	919	4	203	18.0
1942	6,238	2,118,468	2,629,966	275,427	65,331	63.5	4,499,165	2,076,027	879	55	207	18.1
Central of New Jersey† 1943	657	269,223	309,433	60,083	7,967	57.8	606,793	299,797	128	8	17	11.1
1942	661	226,889	257,773	49,304	6,749	61.5	487,393	240,361	95	22	29	19.9
Chicago & Eastern Ill. 1943	912	271,409	293,583	10,525	8,279	62.8	579,396	268,453	65	..	11	14.5
1942	925	200,175	201,847	3,410	5,368	67.7	346,741	159,174	71	3	17	18.7
Elgin, Joliet & Eastern 1943	392	146,723	149,583	2,685	3,721	62.6	301,528	161,267	71	..	8	10.1
1942	392	151,484	153,015	1,454	4,030	60.2	315,197	158,821	70	..	9	11.4
Long Island 1943	374	31,236	32,690	20,313	309	53.7	24,093	9,885	45	..	3	6.3
1942	374	28,352	29,544	18,852	267	53.0	20,055	7,812	39	3	8	16.0
Pennsylvania System 1943	9,942	4,647,720	5,485,229	753,038	157,630	60.0	11,649,850	5,539,298	1,965	..	164	7.7
1942	9,946	4,253,324	4,991,072	616,282	154,898	63.6	10,427,634	4,696,944	1,873	92	168	7.9
Reading 1943	1,419	631,304	703,336	85,960	18,669	60.2	1,496,856	799,392	288	8	29	8.9
1942	1,430	555,246	616,225	79,640	16,170	62.0	1,195,563	605,693	274	28	40	11.7
Pocahontas Region:												
Chesapeake & Ohio 1943	3,034	1,066,352	1,152,557	56,040	44,719	56.7	3,853,843	2,162,044	443	..	70	13.6
1942	3,053	970,471	1,038,754	44,490	41,417	57.4	3,429,104	1,874,099	419	23	69	13.5
Norfolk & Western 1943	2,134	840,728	912,103	75,752	35,356	58.0	3,096,738	1,688,983	297	10	27	8.1
1942	2,159	805,488	858,855	56,459	34,180	57.7	2,863,899	1,524,216	303	11	16	4.8
Southern Region:												
Atlantic Coast Line 1943	4,982	1,121,433	1,157,969	16,868	29,635	62.8	2,038,113	969,947	354	8	21	5.5
1942	4,986	884,522	898,884	14,485	21,263	63.5	1,302,379	505,678	304	..	37	10.9
Central of Georgia† 1943	1,783	314,822	320,604	5,438	6,969	69.4	468,238	217,854	108	..	9	7.7
1942	1,783	307,786	310,080	4,911	6,915	70.9	415,524	176,151	105	..	15	12.5
Gulf, Mobile & Ohio 1943	1,962	387,032	479,853	7,207	11,974	69.2	812,087	400,769	118	..	5	4.1
1942	1,962	274,264	325,623	2,272	8,999	71.7	541,878	238,322	94	2	10	9.4
Illinois Central (incl. Yazoo 1943	6,365	1,915,540	1,937,561	40,100	65,276	60.0	4,830,412	2,267,250	627	..	70	10.0
& Miss. Vy.) 1942	6,501	1,774,758	1,791,964	34,676	54,050	64.4	3,635,056	1,652,244	611	4	89	12.6
Louisville & Nashville 1943	4,735	1,622,848	1,769,038	45,128	37,361	61.6	2,780,595	1,415,764	429	1	58	11.9
1942	4,789	1,516,936	1,640,353	43,593	35,700	61.6	2,541,654	1,247,755	382	10	69	15.0
Seaboard Air Line* 1943	4,171	1,024,781	1,130,652	12,917	25,462	65.8	1,762,246	799,471	306	..	21	6.4
1942	4,295	884,594	928,205	6,851	21,915	64.8	1,396,775	564,668	268	..	32	10.7
Southern 1943	6,478	2,159,367	2,206,426	31,882	44,918	66.1	3,013,107	1,381,531	602	..	62	9.3
1942	6,469	1,876,851	1,912,824	28,864	42,358	67.9	2,565,532	1,113,380	571	1	95	14.2
Northwestern Region:												
Chi. & North Western† 1943	8,098	1,029,920	1,077,231	24,483	29,087	64.6	2,041,474	916,240	398	36	63	12.7
1942	8,264	1,054,844	1,093,418	23,231	31,688	65.8	2,022,972	808,044	357	30	173	30.9
Chicago Great Western 1943	1,447	286,370	293,066	9,461	7,978	68.4	538,309	243,409	75	..	7	8.5
1942	1,447	306,932	314,056	8,138	9,290	67.3	577,751	229,973	74	1	10	11.8
Chi., Milw., St. P. & Pac.† .. 1943	10,806	1,567,107	1,674,735	76,826	44,780	67.1	3,107,208	1,511,670	526	29	57	9.3
1942	10,813	1,568,770	1,647,107	69,362	47,721	64.5	3,170,453	1,409,535	496	51	92	14.4
Chi., St. P., Minneap. & Om.. 1943	1,618	236,833	257,624	13,946	5,302	65.1	377,152	175,115	109	14	5	3.9
1942	1,618	255,927	273,748	13,384	6,277	66.8	399,626	172,854	116	8	7	5.3
Duluth, Missabe & I. R..... 1943	545	26,934	27,470	679	406	63.9	25,582	12,137	26	9	16	31.4
1942	542	25,171	25,313	589	412	58.4	26,131	11,267	25	22	27	36.5
Great Northern 1943	8,022	1,090,131	1,090,291	38,277	33,344	72.4	2,260,714	1,117,933	405	12	75	15.2
1942	7,981	1,087,816	1,083,809	34,754	36,593	69.1	2,375,330	1,062,768	367	41	81	16.6
Min., St. P. & S. St. M.† ... 1943	4,258	480,492	491,981	8,391	10,770	65.2	755,224	363,585	130	4	4	2.9
1942	4,258	502,443	514,738	9,911	12,025	66.7	761,945	333,465	129	2	9	6.4
Northern Pacific 1943	6,571	916,616	985,778	75,017	30,170	75.7	2,020,090	1,052,172	381	9	50	11.4
1942	6,593	883,955	935,715	63,100	32,365	72.9	2,009,685	937,783	326	55	75	16.4
Central Western Region:												
Alton† 1943	915	282,298	302,392	1,261	7,145	61.5	517,510	232,549	74	..	3	3.9
1942	915	254,070	281,905	1,547	6,120	64.9	400,801	160,105	70	..	3	4.1
Atch., Top. & S. Fe (incl. 1943	13,160	3,064,728	3,348,007	225,537	89,360	59.7	6,569,345	2,665,553	818	1	101	11.0
G. C. & S. F. & P. & S. F.). 1942	13,367	2,742,812	3,057,429	185,661	82,477	62.3	5,490,717	2,003,909	741	32	113	12.8
Chi., Burl. & Quincy 1943	8,843	1,399,551	1,477,435	49,791	44,929	66.0	3,132,645	1,520,737	499	..	52	9.4
1942	8,904	1,375,735	1,441,842	46,047	45,169	65.6	2,891,467	1,259,332	458	9	83	15.1
Chi., Rock I. & Pac.† 1943	7,740	1,493,584	1,567,505	22,999	39,929	65.3	2,727,521	1,199,014	395	..	76	16.1
1942	7,917	1,335,370	1,386,860	12,319	35,261	63.7	2,233,312	879,673	370	7	112	22.9
Denver & R. G. Wn.† 1943	2,405	458,732	535,420	87,889	13,179	65.0	935,414	442,961	178	6	30	14.0
1942	2,431	422,117	490,542	65,834	11,623	67.3	758,828	334,150	148	10	30	16.0
Southern Pacific—Pac. Lines. 1943	8,276	2,144,815	2,421,586	368,851	79,335	64.5	5,471,409	2,301,646	797	8	124	13.3
1942	8,480	2,205,582	2,455,880	350,415	80,935	66.7	5,184,224	2,065,255	775	6	111	12.4
Union Pacific 1943	9,837	2,877,849	3,056,262	242,858	90,659	65.2	6,322,092	2,881,189	794	..	86	9.8
1942	9,871	2,624,978	2,759,763	204,685	85,450	67.1	5,333,464	2,182,004	723	14	120	14.0
Southwestern Region:												
Mo.-Kans.-Texas Lines 1943	3,281	784,062	821,230	14,461	19,902	56.8	1,412,442	597,342	154	..	19	11.0
1942	3,281	473,770	479,191	8,315	12,361	65.7	756,360	295,400	101	..	73	42.0
Missouri Pacific† 1943	7,070	1,888,991	1,989,309	47,146	55,448	59.7	4,057,322	1,812,534	493	2	63	11.3
1942	7,110	1,465,360	1,532,902	31,912	43,565	64.5	2,866,699	1,181,011	451	14	51	9.9
Texas & Pacific 1943	1,901	393,788	393,788	4,000	11,138	61.1	789,269	311,204	118	16	5	3.6
1942	1,887	323,596	323,596	2,641	10,376	64.3	657,501	244,375	92	23	61	34.7
St. Louis-San Francisco† 1943	4,640	1,051,637	1,121,189	23,317	22,809	59.9	1,630,252	717,037	326	..	26	7.4
1942	4,732	859,157	894,782	15,101	19,402	63.4	1,252,713	511,291	289	6	30	9.2
St. Louis-San Fran. & Texas. 1943	159	34,374	35,465	54	509	60.5	36,115	14,497	11	..	..	..
1942	159	30,014	30,453	53	485	63.5	30,407	11,333	10	1	..	..
St. Louis Southw. Lines† 1943	1,600	548,196	565,275	7,449	17,165	66.3	1,129,378	497,786	120	2	21	14.7
1942	1,600	399,030	404,333	5,221	12,523	73.1	718,271	301,111	93	9	19	15.7
Texas & New Orleans 1943	4,339	1,118,315	1,125,449	26,895	27,830	60.5	1,994,410	845,553	249	1	20	7.4
1942	4,415	863,539	863,880	11,308	23,336	67.4	1,499,605	615,957	218	10	28	10.9

† Report of trustee or trustees.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

Items for the Month of January, 1943, Compared With January, 1942

Region, road, and year	Freight cars on line: Home	Foreign	Total	Per Cent B. O.	G.t.m. per train-hr. excl. locos. and tenders	G.t.m. per train-mi. excl. locos. and tenders	Net ton-mi. per train-mile	Net ton-mi. per l'd. car-mile	Net ton-mi. per car-day	Car miles per car-day	Net daily ton-mi. per road-mi.	Coal lb. per 1000 g.t.m. inc. loco.	Mi. per loco. per day
New England Region:													
Boston & Albany 1943	344	4,998	5,342	0.4	23,298	1,606	678	29.0	649	36.8	9,609	193	87.7
1942	468	4,955	5,423	0.3	22,300	1,315	497	20.9	465	31.7	7,036	166	74.1
Boston & Maine 1943	2,871	11,809	14,680	2.1	29,877	2,109	946	31.1	925	46.6	7,297	116	107.7
1942	3,565	10,098	13,663	2.3	29,469	2,086	830	23.0	678	42.0	4,980	107	86.6
N. Y., New H. & Hartf.†.... 1943	3,634	19,693	23,327	1.4	31,176	2,205	991	28.7	680	35.4	8,410	114	85.4
1942	4,386	21,321	25,707	2.1	29,214	2,064	815	21.6	486	32.0	6,429	112	86.2
Great Lakes Region:													
Delaware & Hudson 1943	5,112	4,823	9,935	4.2	42,218	2,628	1,351	38.3	1,447	60.5	17,088	119	67.2
1942	6,481	5,073	11,554	4.2	38,201	2,450	1,175	32.0	1,058	50.5	14,310	114	60.0
Del., Lack. & Western 1943	7,440	11,037	18,477	2.5	38,644	2,678	1,235	32.0	860	42.2	16,293	131	106.7
1942	8,067	10,724	18,791	3.2	40,583	2,434	1,064	26.4	714	38.4	13,571	136	87.2
Erie 1943	13,841	22,169	36,010	2.7	45,916	2,788	1,270	30.3	1,110	56.0	17,891	106	102.2
1942	12,512	23,299	35,811	1.9	46,260	2,681	1,105	24.8	884	50.3	13,838	105	84.4
Grand Trunk Western 1943	2,359	8,048	10,407	2.7	40,203	2,006	892	30.2	865	44.7	8,259	89	131.8
1942	3,646	7,119	10,765	4.1	34,712	1,794	690	23.7	576	37.1	6,140	99	116.0
Lehigh Valley 1943	8,625	20,039	28,664	1.8	43,374	2,923	1,377	34.0	732	35.5	16,357	126	129.0
1942	8,420	15,293	23,713	1.0	44,946	2,578	1,160	28.5	622	32.0	11,686	123	92.0
New York Central 1943	56,422	92,377	148,799	2.5	38,682	2,581	1,202	34.3	1,002	48.7	14,046	111	111.4
1942	68,813	79,304	148,117	4.0	38,364	2,358	1,045	29.8	791	42.1	10,987	109	102.5
New York, Chi. & St. L..... 1943	3,909	15,300	19,209	1.7	41,151	2,460	1,114	31.9	1,736	89.2	19,725	98	175.2
1942	5,079	12,563	17,642	1.4	39,174	2,150	897	25.8	1,317	75.4	13,208	100	161.8
Pere Marquette 1943	3,842	8,827	12,669	2.5	32,905	2,029	954	33.3	1,189	56.4	7,317	103	112.5
1942	5,496	7,777	13,273	2.5	31,772	1,848	778	27.1	727	41.1	4,960	104	91.1
Pitts. & Lake Erie 1943	4,966	7,955	12,921	4.3	46,599	3,639	2,159	52.2	550	16.6	29,952	92	68.9
1942	8,477	6,541	15,018	8.1	42,515	3,284	1,872	47.6	390	13.0	26,562	96	65.0
Wabash 1943	7,619	13,020	20,639	1.2	42,101	2,313	1,046	31.3	1,180	59.3	10,496	125	118.3
1942	8,561	12,385	20,946	1.0	40,553	2,061	832	24.1	857	51.1	7,435	121	92.6
Central Eastern Region:													
Baltimore & Ohio 1943	43,024	46,454	89,478	2.5	28,670	2,303	1,108	35.8	945	43.4	13,952	157	100.2
1942	46,870	40,383	87,253	2.5	28,311	2,162	998	31.8	786	38.9	10,736	158	86.8
Central of New Jersey† 1943	7,514	18,160	25,674	0.9	27,620	2,291	1,132	37.6	317	17.1	14,720	151	103.2
1942	6,941	17,380	24,321	1.9	29,534	2,230	1,100	35.6	326	14.9	11,730	141	88.9
Chicago & Eastern Ill. 1943	2,106	5,141	7,247	3.1	33,940	2,228	1,032	32.4	1,221	60.0	9,495	131	134.8
1942	2,208	3,320	5,528	2.5	30,561	1,751	804	29.7	933	46.5	5,551	136	77.3
Elgin, Joliet & Eastern 1943	8,799	7,715	16,514	3.6	16,094	2,145	1,147	43.3	299	11.0	13,271	159	94.8
1942	8,644	9,520	18,164	3.3	14,959	2,149	1,083	39.4	286	12.0	13,070	151	105.6
Long Island 1943	29	3,881	3,910	0.3	6,253	786	322	32.0	83	4.8	853	387	47.1
1942	40	4,247	4,287	0.5	5,261	724	282	29.3	63	4.1	674	354	44.7
Pennsylvania System 1943	141,748	120,173	261,921	2.2	31,603	2,580	1,227	35.1	697	33.1	17,973	138	102.9
1942	155,318	97,582	252,900	4.9	34,148	2,518	1,134	30.3	605	31.3	15,234	132	93.1
Reading 1943	17,108	21,544	38,652	2.8	29,364	2,377	1,269	42.8	682	26.5	18,173	128	87.9
1942	19,765	17,676	37,441	6.2	26,400	2,161	1,095	37.5	515	22.2	13,663	139	78.6
Pocahontas Region:													
Chesapeake & Ohio 1943	35,230	14,669	49,899	1.6	51,000	3,676	2,062	48.3	1,444	52.6	22,987	86	83.2
1942	41,681	13,506	55,187	1.2	50,634	3,568	1,950	45.2	1,097	42.2	19,802	86	76.5
Norfolk & Western 1943	30,955	6,901	37,856	2.2	56,525	3,763	2,052	47.8	1,397	50.4	25,531	101	102.9
1942	36,477	7,297	43,774	1.1	56,491	3,621	1,927	44.6	1,079	41.9	22,774	98	96.8
Southern Region:													
Atlantic Coast Line 1943	9,067	23,416	32,483	2.8	28,924	1,825	815	30.7	949	49.2	5,892	109	105.9
1942	10,385	12,899	23,284	4.7	25,372	1,480	575	23.8	705	46.7	3,272	115	94.2
Central of Georgia† 1943	2,333	6,018	8,351	0.9	26,412	1,503	699	31.3	870	40.1	3,941	125	97.1
1942	2,928	5,344	8,272	0.6	25,724	1,365	578	25.5	670	37.1	3,187	128	91.6
Gulf, Mobile & Ohio 1943	2,713	6,153	8,866	1.2	38,295	2,122	1,047	33.5	1,452	62.3	6,589	120	133.3
1942	2,754	5,417	8,171	1.5	36,015	1,983	872	26.5	967	50.9	3,924	116	104.8
Illinois Central (incl. Yazoo 1943	20,613	31,891	52,504	1.0	40,207	2,571	1,207	34.7	1,374	65.9	11,491	124	96.4
& Miss. Vy.) 1942	25,746	25,571	51,317	1.2	33,412	2,097	953	30.6	1,047	53.2	8,198	138	89.3
Louisville & Nashville 1943	30,224	16,970	47,194	2.0	26,103	1,713	872	37.9	937	40.1	9,645	134	126.7
1942	36,047	13,329	49,376	1.9	25,238	1,679	824	35.0	794	36.9	8,405	143	125.7
Seaboard Air Line* 1943	8,074	20,231	28,305	1.6	26,965	1,771	803	31.4	942	45.6	6,183	128	124.7
1942	8,932	13,393	22,325	1.7	27,128	1,615	653	25.8	830	49.7	4,241	134	110.5
Southern 1943	18,861	30,309	49,170	1.7	23,422	1,424	653	30.8	901	44.3	6,880	152	113.4
1942	19,847	25,078	44,925	3.3	23,280	1,383	600	26.3	800	44.9	5,552	153	98.9
Northwestern Region:													
Chi. & North Western† 1943	22,721	30,860	53,581	4.1	30,022	2,044	917	31.5	539	26.5	3,650	148	76.7
1942	28,079	28,784	56,863	4.4	28,405	1,987	793	25.5	456	27.2	3,154	141	68.8
Chicago Great Western 1943	1,349	4,698	6,047	1.6	32,393	1,883	852	30.5	1,385	66.4	5,426	143	126.0
1942	1,387	4,548	5,935	.9	33,045	1,887	751	24.8	1,299	78.0	5,127	133	131.6
Chi., Milw., St. P. & Pac.†.. 1943	28,585	25,927	54,512	2.0	30,279	1,999	973	33.8	908	40.1	4,513	143	98.4
1942	32,846	25,052	57,898	1.4	31,326	2,033	904	29.5	781	41.0	4,205	130	94.1
Chi., St. P., Minneap. & Om.. 1943	1,493	6,859	8,352	6.4	21,011	1,625	755	33.0	649	30.2	3,491	131	70.1
1942	1,902	7,973	9,875	3.8	21,148	1,585	686	27.5	637	34.6	3,446	127	75.2
Duluth, Missabe & I. R..... 1943	14,711	582	15,293	2.5	14,196	987	468	29.9	26	1.3	718	211	24.5
1942	13,160	543	13,703	2.8	13,826	1,094	472	27.3	27	1.7	671	170	17.7
Great Northern 1943	26,391	18,230	44,621	2.6	30,114	2,098	1,037	33.5	845	34.8	4,495	131	80.4
1942	27,605	12,348	39,953	2.1	34,318	2,197	983	29.0	847	42.2	4,296	118	79.1
Min., St. P. & S. St. M.†... 1943	7,986	6,096	14,082	3.5	26,626	1,588	764	33.8	854	38.8	2,754	123	116.6
1942	9,516	6,029	15,545	2.8	26,963	1,530	669	27.7	689	37.2	2,526	113	123.8
Northern Pacific 1943	21,130	13,432	34,562	3.7	32,721	2,212	1,152	34.9	986	37.4	5,165	152	83.6
1942	24,971	8,534	33,505	5.6	36,443	2,288	1,068	29.0	907	42.9	4,588	139	77.4
Central Western Region:													
Alton† 1943	1,088	5,602	6,690	3.8	36,581	1,844	829	32.5	1,069	53.5	8,198	148	135.0
1942	934	6,526	7,460	2.5	36,014	1,591	636	26.2	718	42.3	5,644	158	132.6
Atch., Top. & S. Fe (incl. 1943	51,344	37,470	88,814	3.1	36,999	2,156	875	29.8	944	53.0	6,534	129	132.4
G. C. & S. F. & P. & S. F.). 1942	55,037	21,925	76,962	4.4	39,288	2,007	733	24.3	818	54.0	4,836	126	123.7
Chi., Burl. & Quincy 1943	18,319	22,477	40,796	2.3	36,124	2,256	1,095	33.8	1,194	53.5	5,547	120	95.2
1942	21,838	21,695	43,533	2.3	35,059	2,113	920	27.9	923	50.4	4,562	119	92.5
Chi., Rock I. & Pac.† 1943	14,140	21,754	35,894	4.2	30,934	1,838	808	30.0	1,119	57.0	4,997	132	113.9
1942	14,910	17,914	32,824	2.6	30,453	1,681	662	24.9	892	56.2	3,584	129	97.7
Denver & R. G. Wn.† 1943	8,037	9,309	17,346	2.6	26,316	2,057	974	33.6	755	34.6	5,941	197	98.7
1942	9,302	5,191	14,493	2.7	29,198	1,804	794	28.7	767	39.6	4,434	184	99.9
Southern Pacific—Pac. Lines. 1943	28,167	60,029	88,196	1.9	33,239	2,571	1,082	29.0	819	43.7	8,971	112	101.2
1942	27,112	43,301	70,413	2.2	34,300	2,367	943	25.5	931	54.7	7,856	111	107.7
Union Pacific 1943	31,759	41,988	73,747	2.7	38,821	2,221	1,012	31.8	1,214	58.6	9,448	137	124.2
1942	34,336	27,151	61,487	6.2	39,974	2,051	839	25.5	1,131	66.0	7,131	134	115.3
Southwestern Region:													
Mo.-Kans.-Texas Lines 1943	3,247	11,675	14,922	1.2	30,032	1,821	770	30.0	1,321	77.5	5,873	100	167.1
1942	5,003	7,197	12,200	8.0	30,315	1,600	625	23.9	813	51.8	2,904	96	97.3
Missouri Pacific† 1943	11,007	36,605	47,612	1.1	34,911	2,158	964	32.7	1,246	63.8	8,270	122	124.0
1942	14,071	30,208	44,279	1.1	34,663	1,968	811	27.1	886	50.7	5,358	127	105.1
Texas & Pacific 1943	2,264	4,891	7,155	.9	37,321	2,024	798	27.9	1,217	71.3	5,281	114	99.7
1942	2,603	5,926	8,529	1.6	39,345	2,045	760	23.6	936	61.8	4,178	97	64.0
St. Louis-San Francisco† 1943	9,260	9,015	18,275	3.3	30,154	1,563	687	31.4	1,154	61.3	4,985	146	109.2
1942	11,842	9,846	21,688	2.9	29,188	1,468	599	26.4	774	46.4	3,485	140	96.1
St. Louis-San Fran. & Texas. 1943	....	332	332	13.9	18,240	1,053	423	28.5	1,464	85.0	2,941	138	107.7
1942	....	378	378	5.3	21,955	1,015	378	23.4	991	66.8	2,299	136	91.0
St. Louis Southw. Lines† 1943	1,589	7,374	8,963	.9	32,864	2,071	913	29.0	1,946	101.2	10,036	92	137.0
1942	1,649	5,295	6,944	1.2	33,895	1,818	762	24.0	1,535	87.3	6,071	93	112.6
Texas & New Orleans 1943	4,263	19,465	23,728	1.6	31,565	1,801	764	30.4	1,175	64.0	6,286	94	142.4
1942	4,652	13,852	18,504	2.6	33,625	1,753	720	26.4	1,082	60.8	4,500	88	113.6

* Report of receivers.
† Report of trustee or trustees.

Inner Seal

For

BODY END DOORS
VESTIBULE SIDE DOORS
VESTIBULE TRAP DOORS
LOCOMOTIVE CLOSURES
REFRIGERATOR CAR DOORS

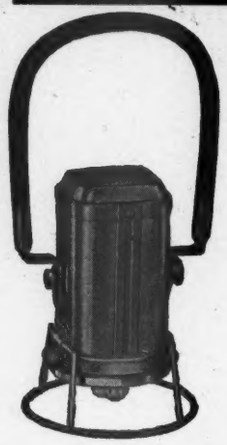
INNER-SEAL
WATERPROOFED
WEATHER STRIPPING

This highly efficient weather stripping is used by leading railroads and car builders. INNER-SEAL keeps out dust, dirt, cinders, rain and snow.

It resists wear, lies flat against any surface and because of its strength and durability, is well-adapted to railroad service. Use INNER-SEAL on doors and closures.

Write for Complete Information
BRIDGEPORT FABRICS, INC.
BRIDGEPORT, CONN.
Established, 1837

JUSTRITE
Twin Bulb **TRAINMEN'S LANTERN**



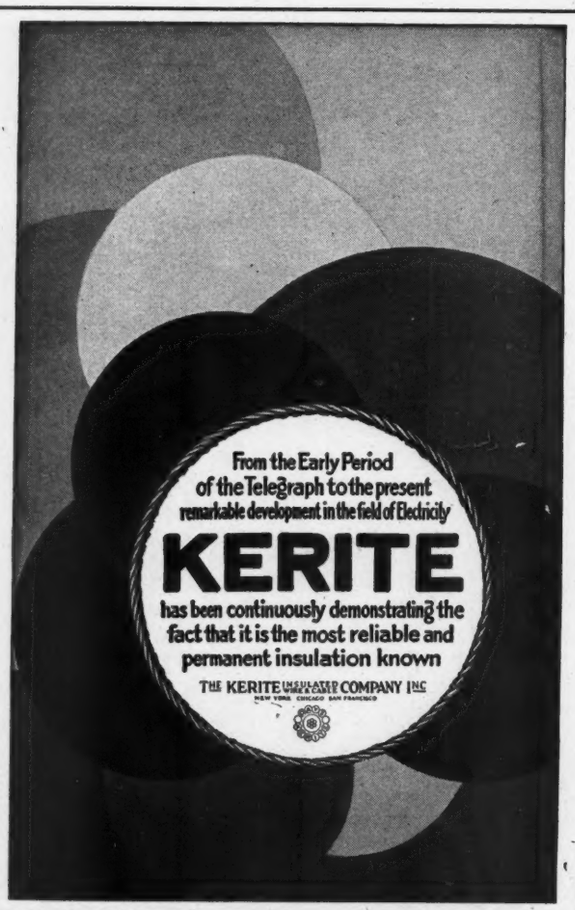
RIGHT *on the* **BEAM**
with 662 candlepower

Power to cut through smoke and fog . . . power to pick up signals the length of a full 110-car train . . . power that won't let you down, because a flick of the switch lights the second bulb instantly whenever the first one burns out. Also, light to sides from same bulb. These features plus rugged Justrite construction insure satisfactory lifetime service.

Write for catalogue of Justrite Safety Products.

JUSTRITE MANUFACTURING COMPANY
2086 N. Southport Avenue
Chicago, Ill.

JUSTRITE *Safety Products*
SAFETY CANS · FILLING CANS · OILY WASTE CANS
APPROVED SAFETY ELECTRIC LANTERNS


From the Early Period
of the Telegraph to the present
remarkable development in the field of Electricity
KERITE
has been continuously demonstrating the
fact that it is the most reliable and
permanent insulation known
THE KERITE INSULATED WIRE & CABLE COMPANY INC.
NEW YORK CHICAGO SAN FRANCISCO

Have You Changed Your Address?

Notice of change of address of subscribers should reach the office of *Railway Age*, 30 Church St., New York, ten days in advance to insure delivery of the following issue to new address. In sending notification of change always include the old address as well as the new.

Name .....

Old Address .....

New Address .....

Position ..... **Company** .....